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San Francisco General Hospital Parking Garage

88.271E

Draft EIR Publication Date: January 15, 1993
Draft EIR Public Hearing Date: February 18, 1993
Draft EIR Public Comment Period: January 15 to February 18, 1993

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TO: Distribution List for the San Francisco General Hospital Parking Garage Draft EIR

FROM: Barabar W. Sahm, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report on the San Francisco General Hospital Parking Garage

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This is the Draft of the Environmental Impact Report (EIR) for the San Francisco General Hospital Parking Garage. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" which will contain a summary of all relevant comments on this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. *The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution.* It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them.

If you want a copy of the Final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

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Attn: Jim McCormick, EIR Coordinator
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INTRODUCTION

The San Francisco Parking Authority is proposing to construct an 800- to 1,200-space parking garage adjacent to the San Francisco General Hospital. It is proposed to be located on the entire city block bounded by 23rd Street, Utah Street, San Bruno Avenue and 24th Street, in the City and County of San Francisco, directly south of the hospital. The proposed project would include demolition of the existing MUNI facilities at that location. The parking garage is intended to serve the hospital staff, patients and visitors as well as neighborhood residents and commercial patrons.

In compliance with the California Environmental Quality Act (CEQA), the City and County of San Francisco prepared a preliminary environmental assessment of the proposed project in the form of an Initial Study (see Appendix A), which was distributed to the public on July 17, 1992. The Initial Study determined that an Environmental Impact Report (EIR) is required for this project and identified topics requiring detailed environmental evaluation. This document is the Draft EIR and has been prepared in compliance with the CEQA and the San Francisco guidelines for its implementation. It will be followed by a Final EIR, after public review and comment on the Draft EIR. The Draft and Final EIRs are informational documents for use by the City and the public in identifying potential environmental consequences of implementing the proposed demolition and construction of a parking garage.

This Draft EIR is provided for review by the public and interested agencies for a period of 34 days. During the review period, persons are encouraged to comment on the contents of the Draft EIR, either during the formal public hearing or in writing to the City and County of San Francisco, Department of City Planning. All comments received on the Draft EIR will be responded to individually in writing and presented in a Summary of Comments & Responses, which will be prepared following the close of the 34-day review period. The Comments & Responses document will be distributed to all those who commented on the Draft EIR as well as to anyone who formally requests a copy. The City Planning Commission will then conduct a certification hearing and certify the EIR if the Draft EIR and the Summary of Comments & Responses are determined to be adequate, accurate and objective.

The Final EIR will be prepared, combining the Draft EIR, the Summary of Comments & Responses, and any addenda, errata, or modifications. The Final EIR will be reviewed and considered by various decision makers prior to their ultimate decision to approve, disapprove, or modify the project which is finally proposed.

CHAPTER 1
SUMMARY

PROJECT DESCRIPTION (pages 11 to 32)

The San Francisco Parking Authority is proposing to construct an 800- to 1,200-space parking garage adjacent to the San Francisco General Hospital (SFGH). It is proposed to be located on the entire city block bounded by 23rd Street, Utah Street, San Bruno Avenue and 24th Street (Assessor's Block 4213, Lot 1) in the City and County of San Francisco, directly south of the hospital. The proposed project would include demolition of the existing MUNI facilities at that location, after relocation of the operations currently using the site. The parking garage is intended to serve the hospital staff, patients and visitors as well as neighborhood residents and commercial patrons.

The first phase of construction would include a six-level parking structure with a capacity of approximately 750 to 780 spaces and a surface parking lot with about 50 to 70 spaces, yielding a total parking capacity of approximately 800 to 850 spaces for the entire site. The 300,000-square-foot structure would be located on the northern two thirds of the site, and the surface lot on the southern one third. As required by the existing height limits, the maximum height of the structure as measured under the City Planning Code would be 40 feet to the roof deck (although the parapet, elevator penthouses and stair tower are allowed to be higher). The main entrance/exit to the site would be located on 24th Street, and there would be a secondary access on 23rd Street for use in the evenings only. Parking fees would be charged at the garage, and the garage would operate 24 hours per day.

The second phase of the construction would increase the parking capacity of the site to 1,200 spaces by constructing a 400-space parking structure on the surface parking lot on the south side of the site, connected to the Phase 1 structure. The Phase 2 structure would be subject to the same 40-foot maximum height limitations, and the total gross area for the entire structure would be about 450,000 square feet. There would be an additional future access constructed in the Phase 2 portion of the garage, located on Utah Street, to accommodate the increased flow of traffic. Operation of the Phase 1 parking structure could be maintained during construction of the Phase 2 parking structure.

The total construction period for Phase 1, including demolition, is expected to be about 18 months. Estimated construction cost of the proposed parking facility is about $12.8 million for Phase 1, and approximately $19.2 million is estimated for the total construction costs for both phases.
The City and County of San Francisco prepared an Initial Study (see Appendix A) on the proposed project and distributed it to the public on July 17, 1992. The Initial Study determined that the project may have a

significant effect on the environment and that an environmental impact report (EIR) is required. The Initial Study identified some environmental effect to be insignificant, which are as follows: population/growth inducement; utilities and public services; vegetation and wildlife; geology and topography; water quality; historical architecture; cultural resources; and energy. The Initial Study also identified the topics to be included in this EIR for detailed environmental assessment: Land Use; Traffic, Circulation and Parking; Noise; Air Quality; Visual Quality; and Hazards.

POTENTIAL IMPACTS (pages 66 to 116)

Land Use (pages 65 to 68)

The project's scale and character would be more similar to the scale and institutional character of the adjacent SFGH facilities than to the surrounding residences. Therefore, development of the proposed parking garage at the project site would appear as an extension of the SFGH campus south of 23rd Street, into an area not currently occupied by medical facilities although it is already occupied by a public services facility (i.e., MUNI maintenance). Since there would be no other buildings of similar scale or mass in the project vicinity (except for potentially, the proposed Gladstone building to the west and SFGH facilities to the north), there would be no transition between the public or institutional use of the project site and the surrounding residential neighborhood. The proposed structure after completion of Phase 2 would be about 60 feet maximum above street level at the stair tower at the corner of 24th and Utah streets, even though the roof deck would have an average height of 40 feet in conformance with the height restrictions. This would contrast with the 30-foot high (two- and three-story) buildings in the surrounding neighborhood.

The proposed parking use would be consistent with allowable uses under the current "P" zoning designation on the project site. The project would also be consistent with the San Francisco General Hospital Medical Center Institutional Master Plan (1987), which designates the project site as a parking garage. Although the proposed parking structure would be 65 feet high along 24th Street, it would conform to the zoning height restrictions that apply to the site and adjacent residential properties.

Transportation, Circulation and Parking (pages 69 to 90)

The transportation analysis conducted for this EIR was based substantially on two previous studies conducted for the SFGH Mental Health Facility, one report by William Marconi in 1989 and the other by Dowling Patterson Associates in 1990. Based on these previous studies, it was determined that the current peak parking demand at SFGH is 1,650 spaces, of which 584 spaces can be provided at existing parking on the SFGH campus. The net peak parking demand in the neighborhood surrounding SFGH is therefore

1,066 spaces, with a vehicle to employee ratio of 0.60. If the proposed parking garage is constructed, a number of factors in combination would affect the future parking demand; these include the size of the garage, the parking rate structure at the garage, the presence of a residential permit parking (RPP) program, and the effectiveness of transportation systems management (TSM) programs at SFGH. The EIR analyzed a range of scenarios with varying garage sizes, TSM effectiveness, and parking rate structures. The 850-space garage with RPP, high TSM and high parking rates would have the greatest effect in reducing vehicle to employee ration and overall parking demand. The 1,200-space garage with RPP, low TSM effectiveness, and low parking rates would likely encourage employee auto use and cause the greatest increase in vehicle to employee ratio.

Currently, all intersections in the study area are functioning at LOS "B" or better during the PM peak hour. With project traffic added to existing volumes, all study intersections would be operating at LOS "D" or better during the PM peak hour. The overall effect of the proposed parking garage (under Phase 1 or Phase 2) would be to redistribute existing traffic and concentrate it in the vicinity of the project site. Under cumulative conditions including completion of Phase 2 of the garage, the LOS would decrease at most locations, but would generally still be at LOS "C" or better. Only the intersections of Potrero/23rd and Utah/23rd would be operating at LOS "D".

At the proposed garage, the PM peak hour traffic is estimated to be 809 trips (188 in and 621 out) for the 1,200-space garage. The proposed entry/exit lane design for the parking facility would provide 3 entry lanes and 1 exit lane during the AM peak hour, and 1 entry lane and 3 exit lanes during the PM peak hour. Under this design, the maximum queues are anticipated to be 5 to 6 vehicles, with no measurable congestion on local roadways. The project would generate an increase in pedestrian traffic crossing 23rd Street at Utah Street and San Bruno Avenue. The peak pedestrian volume is estimated to be 891 people (207 inbound and 684 outbound) during the PM peak hour. These volumes do not warrant a signal at these intersections, but clearly marked pedestrian crosswalks would enhance pedestrian safety.

The major construction impact would be the displacement of on-street parking (about 100 spaces) around the perimeter of the site for the 18-month construction period, coupled with an increase in demand for parking by construction workers (about 40). Most likely the displaced motorists and construction employees would park east of Highway 101.

Noise (pages 91 to 96)

Project-related construction equipment would not be expected to exceed the City's noise limit (Article 29) of 80 dBA at 100 feet, assuming feasible noise controls are implemented. However, the interior noise

environment at adjacent residences would be periodically affected during project construction. Residents located along haul routes would be subject to truck noise during the 18-month construction period, with most of the truck traffic occurring during the three-month demolition and excavation phases.

Once the project garage is operating, the resulting redistribution of hospital-related traffic onto roadways surrounding the project site would result in localized noise increases. Project-related noise increases would not be noticeable along surrounding roadways except the section of 24th Street between the project access and Potrero Avenue and the section of Utah Street between the future Phase 2 access and 24th Street.

The proposed parking garage would have no mechanical ventilation system and no associated noises. However, the parking garage would generate short-term noise peaks associated with slamming car doors, engine start-ups, vehicles driving up and down ramps, squealing tires, and possibly car horns. In addition, the proposed parking facility would introduce new sources of noise at higher elevations on the site, possibly at the same elevation as the second or third floors of adjacent residences. Based on noise measurements taken at other parking garages, noise increases at adjacent residences due to this noise source would not be noticeable.

Air Quality (pages 97 to 105)

Project construction would generate short-term air emissions of dust from demolition and surface disturbance, from equipment exhaust from construction equipment and vehicles, and from off-site trucks hauling dirt, asphalt or building materials. These impacts would tend to be more of a nuisance, especially from dust soiling, rather than creating measurably unhealthful impacts. Dust emissions of about 50 pounds per day are predicted during the first four months of construction, and due to prevailing winds, would typically be carried toward residences along the eastern project boundary on San Bruno Avenue. Emissions of particulates generated by project construction would increase particulate concentrations, which would incrementally increase the frequency of inhalable particulate (PM-10) violations in San Francisco. The local air basin could accommodate the additional temporary project emissions from construction equipment and vehicles with no measurable degradation in area air quality.

Mobile source pollution changes on an areawide basis would result from changes in travel volumes on local streets around the project vicinity, as well as from new travel into the parking facility proper. The changes in travel volumes on local streets would depend on the balance of TSM effectiveness, parking rate structure, and garage size. As a worst case, for a 1,200 space garage with low TSM effectiveness and low parking rates, the vehicle to employee ratio could increase by a maximum of 10%, or based on a parking demand of 1,650, result in a net increase in 165 vehicles. The associated increase in regional pollutant emissions

would be minimal. For other combinations of TSM effectiveness and parking rates, the emissions would be even less.

Locally, the proposed parking garage would redistribute vehicles in the SFGH vicinity roadway system with potential increases in carbon monoxide (CO) at intersections in the study area. However, based on results of Modified Linear Rollback modeling of traffic volumes at the four intersections adjacent to the project site, the combination of CO levels from the proposed project plus background would not threaten continued attainment of the 1-hour or 8-hour CO standards in the SFGH vicinity for even the worst-case traffic scenario. Localized CO emissions within the proposed parking structure are estimated to be less than 35 ppm which is less than the applicable Occupational Safety and Health Administration (OSHA) standard of 50 ppm. CO emissions from the garage to the sidewalk at the nearest point of public access was calculated to be 5.6 ppm above background, which is less than the measured peak background level of 8 ppm and the California ambient 1-hour standard of 20 ppm.

Visual Quality and Urban Design (pages 106 to 112)

At present, the project site is developed with a one- and two-story stucco-clad building which was constructed in 1910. A modern addition, added in 1952, has compromised the architectural integrity of the original structure. The site is located in a mixed use (commercial/residential) neighborhood, which adjoins the SFGH campus. There are no street trees or landscaping on the site.

The proposed parking structure would have an average height of 40 feet as measured under the City Planning Code. However, at the stair tower at the corner of 24th and Utah streets, the structure would have a maximum height of about 60 feet. The prevailing height of residential/commercial structures in the neighborhood is about 30 feet. The Main Hospital Building on the SFGH campus (north of the site) is 100 feet in height. The parking structure would provide a transition between the heights of SFGH buildings and the residential neighborhood, but would be more than twice the height of the residential/commercial structures across the street at the southern end of the site.

The parking structure would cover a 200- by 400-foot city block (with setbacks from the street right-of-way). This massing would contrast with the 20- to 40-foot street frontages of buildings on adjoining blocks. It is more characteristic of the institutional buildings on the SFGH campus.

Landscaping and lighting plans for the development have not been prepared. There are opportunities for the landscaping to improve the aesthetics of the neighborhood, in general, and of the pedestrian environment along the building frontages.

Hazards — Public Health and Safety (pages 113 to 116)

The proposed project site has been identified to contain hazardous wastes both in the existing building as well as in the subsurface soils and groundwater. Demolition, construction and operational activities associated with the garage would result in the potential exposure of persons to hazardous wastes.

Growth Inducement (page 116)

There would be no effect on population growth associated with the project. The proposed project would result in about six new jobs associated with operation and maintenance of the new facility. The existing MUNI operations would be relocated prior to demolition of the facilities, and the proposed project would therefore not displace any jobs. Similarly, there would be no effect on housing or housing supply in the City.

MAJOR MITIGATION MEASURES (pages 117 to 125)

Some of the measures included in the proposed project that would mitigate potentially significant environmental effects are presented below. A full list of mitigation measures proposed as part of the project or proposed for consideration are presented on pages 117 to 125.

Transportation, Circulation and Parking

- Remove two parking spaces from both sides of Utah Street at the intersections with 23rd and 24th streets to improve the line-of-sight for motorists and to improve pedestrian safety.
- Provide clearly marked pedestrian crosswalks along 23rd Street at Utah Street and San Bruno Avenue, including appropriate signage for passing motorists.
- Establish a designated truck route.
- Develop an operational plan, including signage, for the garage regarding site access, entry and exit lane operation, and pedestrian interaction.

Noise

- Employ best available noise controls on construction equipment and vehicles.
- Limit construction to daytime, weekdays only.
- Avoid use of pneumatically-powered impact tools during construction to the extent possible.
- Design Phase 2 access on Utah Street as close to 24th Street as possible.

Air Quality

- Establish a program of dust control and dirt containment to minimize particulate emissions.

Visual Quality

- Prepare a detailed landscape plan that addresses screening, security and maintenance concerns.
- Plant street trees along San Bruno Avenue, 24th Street and Utah Street.
- Prepare a detailed lighting plan that addresses security, safety, and glare concerns.

Hazardous Materials

- Coordinate with the Department of Public Health during design, construction and operation so that soil and groundwater remediation efforts can continue concurrently with the project.
- Remove all contaminants and hazardous materials from the MUNI facility prior to demolition.
- Establish a contingency plan to address the potential for encountering hazardous materials during construction.

ALTERNATIVES (pages 127 to 142)

Six alternatives to the proposed project were evaluated for environmental effects relative to those for the proposed project. The alternatives are: (A) parking structure plus residential use; (B) parking structure plus commercial use; (C) off-site parking structure; (D) reduced-scale parking structure; (E) re-configured parking structure, and (F) no project alternative.

Alternative A: Parking Structure Plus Residential Use

The parking/residential use alternative would consist of 133 dwelling units located above a 900-space parking garage. This alternative would require rezoning of the site as a mixed use project. Residential uses would be consistent in kind with surrounding uses, but could differ in the design and density of development. Massing and scale would be similar to the proposed project, which would contrast with scale of the adjacent neighborhood. Traffic volumes would be similar to that of the Phase 1 parking garage, but LOS at adjacent intersections may be affected but would likely remain unchanged. Noise and air quality impacts would be similar to the proposed project, although there may be some odor nuisance from exhaust fumes rising to the upper story residences. However, it is assumed that the garage would be ventilated as required by the building codes, and any odor nuisance would be subject to the Bay Area Air Quality Management odor and nuisance guidelines (BAAQMD Regulation 1-301, Public Nuisance). Visual quality would depend on the actual design of this alternative, though massing and scale would be similar to the proposed project. Public health concerns associated with the presence of hazardous materials would be the same as for the proposed project. This alternative would not extend new services, utilities or roadways to undeveloped areas, and thus would not encourage new growth.

Alternative B: Parking Structure plus Commercial Use

The parking/commercial use alternative would consist of 60,000 square feet of street-level commercial uses combined with a 1,100-space parking garage. This alternative would require rezoning of the site as a mixed use project. Commercial uses would be compatible with surrounding uses along 24th Street. Massing and scale would be similar to the proposed project, which would contrast with scale of adjacent neighborhood. Traffic volumes would be similar to that of the Phase 2, 1,200-space parking garage, but commercial uses would generate additional peak hour traffic and LOS at adjacent intersections may be affected. Noise and air quality impacts would be similar to the proposed project. Visual quality would depend on the actual design of this alternative, though massing and scale would be similar to the proposed project. Public health concerns associated with the presence of hazardous materials would be the same as for the proposed project. This alternative would not extend new services, utilities or roadways to undeveloped areas, and thus would not encourage new growth.

Alternative C: Off-SiteParking Structure

The off-site parking garage alternative includes three potential sites within the SFGH campus, as examined in the SFGH Institutional Master Plan. These sites are: (1) the open space along Potrero Avenue in front of the Main Hospital building; (2) the area south of the Mental Health Facility; and (3) the emergency room parking lot along 23rd Street by the Main Hospital building. These sites could accommodate from 175 to 925 parking stalls, with potential requirements for underground construction. Relocation of the MUNI operations would occur regardless of the location of the proposed parking garage. Land use would be compatible within the SFGH campus, although they may conflict with designated uses in the SFGH Institutional Master Plan. The size of the parking garage at any one location would not meet the existing parking demand, although construction of garages at a combination of the sites could provide adequate parking to meet the demand. Traffic congestion due to project traffic in combination with existing campus traffic would occur at access points to SFGH along Potrero Avenue and along 23rd Street. Construction of the parking garage within the SFGH campus would increase noise and air quality effects to sensitive receptors at the hospital during construction. Visual effects would depend on the actual design of the structure, although there would be loss of currently limited open space on the SFGH campus. Hazardous materials remediation would continue at the 24th and Utah site, regardless of this project, and presence of hazardous materials at these sites is unknown. There would be no growth inducement associated with building a parking garage(s) within the SFGH campus.

Alternative D: Reduced-scale Parking Structure

The reduced-scale parking garage alternative would be the same as the Phase 1 parking structure, which is addressed as part of the proposed project.

Alternative E: Re-configured Parking Structure

This alternative would consist of a re-configuration of the proposed project constructed at the proposed site, with the same number of parking spaces and the same access points. The only difference would be that the parking structure would occupy approximately the eastern half of the block bound by 23rd Street, San Bruno Avenue, 24th Street, and Utah Street, and that the western one-half of the block would remain vacant for unspecified future uses. At buildout, the parking structure would be 125 feet wide, 400 feet long and an average of 65 feet along San Bruno Avenue. The northern portion of the structure (about one third) would have 8 levels of parking (7 stories with roof top parking), and the southern two thirds of the structure would have 7 levels of parking (6 stories with roof top parking). Similar to the proposed project, the northern part of the structure would be about 1 to 1½ stories below grade. This alternative, as described above, would exceed the current 40-foot height limit and would require re-classification of the site to a 65-foot height limit. However, as an option, this alternative could also be developed without a height re-classification in one of two ways: (1) re-configured alternative built within the 40-foot height limit and provide only 950 spaces; or (2) re-configured alternative built within the 40-foot height limit, but with sub-grade parking to accommodate the total 1,200 parking spaces. Approval of the sub-grade variant of this alternative would require additional environmental review.

The re-configured alternative would increase the contrasting massing and scale of the project relative to the surrounding residential and commercial uses, although would be compatible with the scale of the SFGH Main Hospital Building. Concentration of the parking uses along the westside of San Bruno Avenue would contrast with the residential uses on the eastside of the street. The proposed structure would potentially cast shadows on the adjacent residential/commercial uses during certain times of the year, although it would not be anticipated to cast shadows on any open space or park uses in the vicinity. Under this alternative, the western portion of the block would be left undeveloped at this time, but with a height reclassification could result in a net increase in allowable development of the entire block. Transportation impacts would be similar to the proposed project, although under Phase 2 development, an access point along San Bruno Avenue would be necessary and may affect adjacent residential uses. Noise and air quality impacts would also be similar to the proposed project, although they would be concentrated along San Bruno Avenue directly adjacent to residential uses. Visually, the re-configured alternative (65 feet in height) would contrast in mass and scale to the surrounding residential and commercial uses (about 30 feet in height), since it

would be more than twice the height of the residential and commercial uses. In addition, this alternative may interfere with on-going groundwater remediation efforts in the southeast quadrant of the site. This alternative would not extend new services, utilities or roadways to undeveloped areas and thus, would not encourage new growth.

Alternative F: No Project

The no project alternative would leave the existing MUNI facilities on the site as is, and there would be no construction of a parking garage. Existing parking shortages on the SFGH campus and in the surrounding neighborhoods would continue. MUNI operations would relocate regardless of the proposed project, and the site would become available for other uses. Land use issues regarding compatibility with adjacent uses would arise with any redevelopment of the site. The no project alternative would not achieve the aesthetic benefits associated with landscaping and tree planting that would occur with the proposed project.

CHAPTER 2
PROJECT DESCRIPTION

BACKGROUND

The San Francisco General Hospital (SFGH) is located at 1001 Potrero Avenue in the City and County of San Francisco. It is a general acute-care facility owned and operated by the City and, through its affiliation with the University of California at San Francisco, it is also a teaching hospital. SFGH is the busiest hospital in the City, serving approximately 16 percent of all patients treated in the City. Policies and plans governing future growth and development of SFGH are contained in the *San Francisco General Hospital Medical Center Institutional Master Plan.*[1]

The Institutional Master Plan states that the hospital needs will require construction of parking facilities and recommends the proposed location as the site for construction of a parking garage. SFGH has undertaken a transportation study (1987),[2] an on-site parking management study (1989),[3] and an economic analysis and market survey for the proposed parking garage site (1990).[4] These studies all identified the need to construct a parking facility to serve the medical center and to make on-street parking available to neighborhood residents. The San Francisco Parking Authority would be responsible for constructing the parking facility.

OBJECTIVES OF THE PROJECT SPONSOR

The San Francisco Parking Authority is proposing to construct an 800- to 1,200 space parking garage adjacent to the San Francisco General Hospital. The purpose of the proposed garage is to help meet the parking demand to serve the hospital staff, patients and visitors and also the neighborhood residents and

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[1] City and County of San Francisco, Department of Public Health, 1987. *San Francisco General Hospital Medical Center Institutional Master Plan.* Kaplan, McLaughlin, Diaz and Gordon H. Chong & Associates. November 1987.

[2] DKS Associates, 1987. *San Francisco General Hospital Medical Center, Master Plan Update, Transportation Study.* November 1987.

[3] Nelson\Nygaard, 1989. *San Francisco General Hospital Parking Management Study.* Draft Final Report, May 30, 1989.

[4] Wilbur Smith Associates and International Parking Design, 1990. *Economic Analysis and Market Survey for the 24th and Utah Street Parking Facility.* Prepared for the San Francisco General Hospital Medical Center, City and County of San Francisco. October 19, 1990.

patrons of the 24th Street neighborhood commercial district. The San Francisco Parking Authority is the project sponsor, and the San Francisco Department of Public Works, Bureau of Architecture would manage the design and construction of the proposed parking facilities. The architectural firm for the proposed project is Fong & Chan Architects in San Francisco.

PROJECT LOCATION

The proposed site for the parking garage is located on the entire city block (200 feet by 400 feet or 80,000 square feet) bounded by 23rd Street, Utah Street, San Bruno Avenue, and 24th Street. The site is directly south of the San Francisco General Hospital and 1½ blocks east of Highway 101. The site comprises all of Assessor's Block 4213, which is zoned "P" for public uses and has a 40-foot building height restriction. Access to the project site is provided by Highway 101, the Army Street exit to Potrero Avenue, 23rd and 24th streets. The site location and access is shown in Figure 1, and the project vicinity and hospital campus are shown in Figure 2.

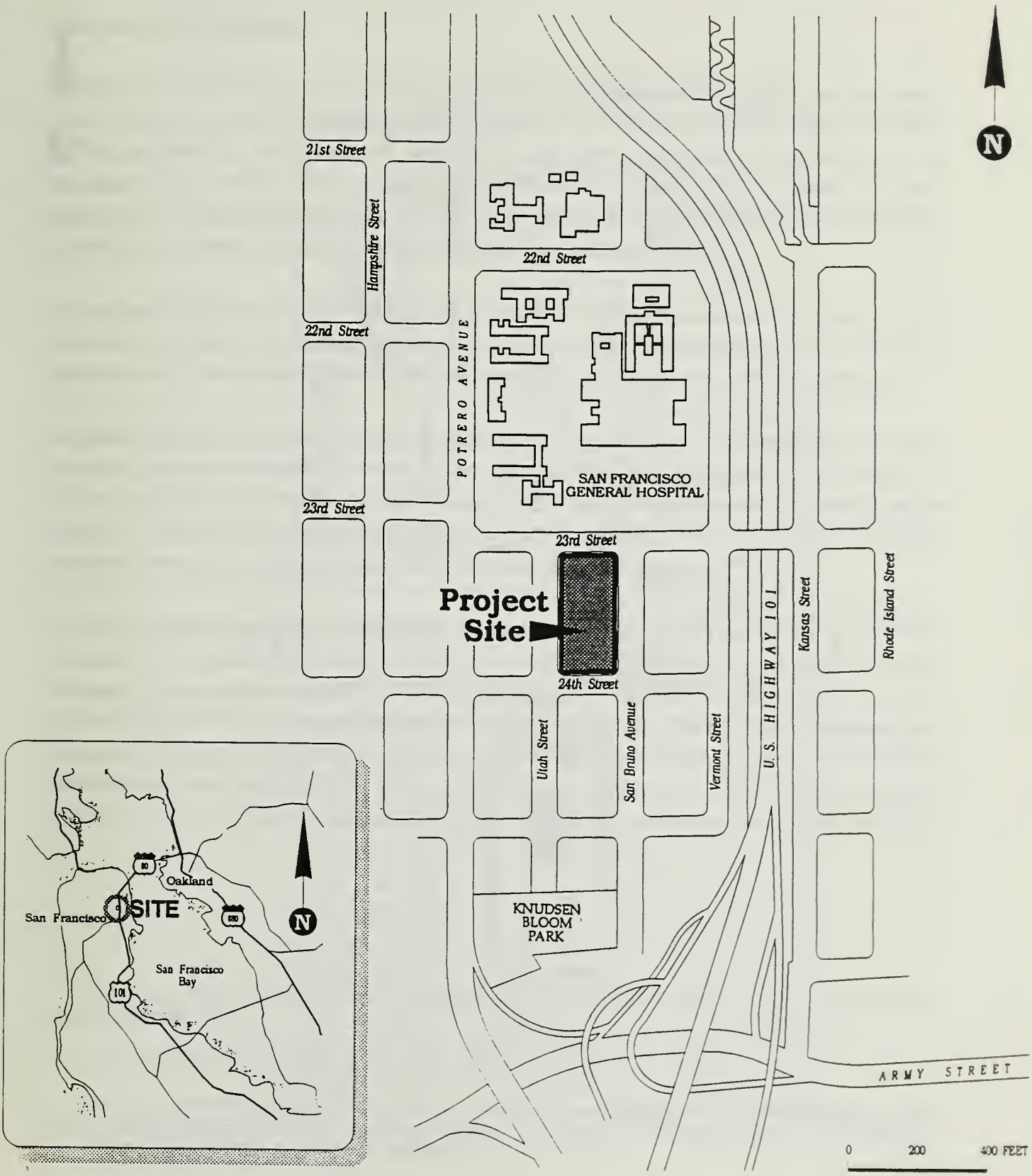
ENVIRONMENTAL REVIEW

In compliance with the California Environmental Quality Act (CEQA), the City and County of San Francisco prepared an Initial Study (see Appendix A) on the proposed project, which was distributed to the public on July 17, 1992. The Initial Study determined that the project may have a significant effect on the environment and that an environmental impact report (EIR) is required. The Initial Study examined the full range of environmental topics required under CEQA and provided a preliminary assessment of the potential environmental effects associated with project implementation. It identified the effects determined to be insignificant and those determined to be potentially significant; and the latter were used to determine the focus of the EIR.

As identified in the Initial Study, the topics analyzed in this EIR for detailed environmental assessment are as follows: Land Use; Traffic, Circulation and Parking; Noise; Air Quality; Visual Quality; and Hazards. Chapter 3 of this document describes the existing conditions in each of these topics; Chapter 4 presents the analysis of potential environmental effects; and Chapter 5 recommends mitigation measures to lessen identified impacts. Chapter 6 summarizes significant environmental effects. The EIR also evaluates five alternatives and compares their potential effects with the proposed project, as discussed in Chapter 7.

SITE LOCATION
San Francisco General Hospital
Parking Garage Project

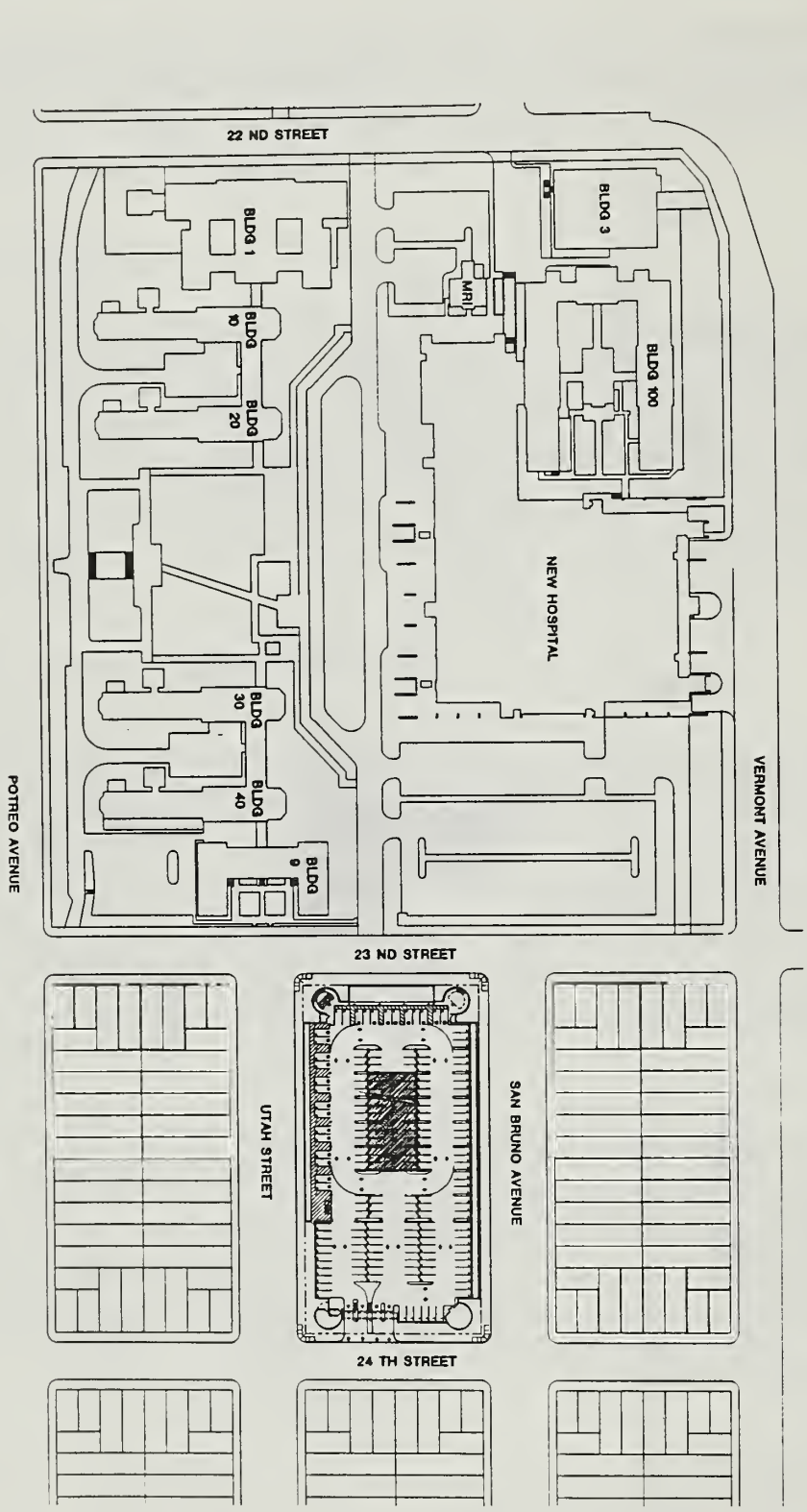
FIGURE



Source : Orion Environmental Associates, 1992

VICINITY LOCATION
San Francisco General Hospital
Parking Garage Project

FIGURE 2



Source : Fong and Chan Architects, 1992

EXISTING SITE CONDITIONS

Currently, there is an existing facility on the project site, consisting of a warehouse-type structure located on the 23rd and Utah streets frontages, with the remainder of the site paved and fenced. The existing facility and site are owned by the City's Public Utilities Commission (PUC) and used as headquarters for the Municipal Railway (MUNI) Ways and Structures Division, which is responsible for building and track maintenance. The site was formerly also used as a maintenance facility for MUNI's non-revenue vehicles (service-related vehicles, not buses), which was discontinued in January 1990.[5]

The existing building was constructed in 1904 as the Market Street Railway's motor bus garage. In 1952, the building was badly damaged by a fire, and portions of the building were rebuilt and continued for use for bus storage. The facilities have been used as a car barn, bus garage, and vehicle maintenance.

On September 22, 1987, the PUC declared the project site as "surplus"[6] and is currently planning to relocate the existing operations at the 24th and Utah streets site, regardless of the proposed parking garage. The PUC has identified an existing vacant facility located at 700 Pennsylvania Avenue as a potential site for relocation. The San Francisco Parking Authority is currently negotiating with PUC to assist in the MUNI relocation efforts and to develop the 24th and Utah site as a parking garage.

Hazardous materials have been identified in the subsurface materials on the proposed site. In 1987, nine underground storage tanks were removed from the southeast quadrant of the site, and there was evidence that leaks in the tanks had resulted in contamination of soils on the site with petroleum products. Further site characterization in 1989 indicated that petroleum hydrocarbons, measured as gasoline and diesel, were present in the soils and groundwater at the site in concentrations considered hazardous by the Regional Water Quality Control Board, San Francisco Region.[7] Remediation of the contaminated materials is required. The PUC and San Francisco Department of Public Health are currently overseeing further hazardous

[5] Katz, John, 1992. Telephone communication with John Katz, MUNI Transit Planner, Capital Planning Group, August 24, 1992.

[6] San Francisco Public Utilities Commission, 1987. Resolution No. 87-0379.

[7] Harding Lawson Associates, 1989. *Preliminary Petroleum Leak Investigation Muni Maintenance Facility 24th and Utah Street Garage, San Francisco,California*. Prepared for City and County of San Francisco, Department of Public Works, Bureau of Architecture, March 9, 1989.

materials investigations and remediation efforts.[8,9] These issues are discussed further under Hazards, pages 61 to 64.

PROPOSED PROJECT

The proposed project consists of demolition of the existing building on the site and construction of a parking garage with an ultimate capacity of 1,200 parking spaces. The parking garage would be built in two phases, with the first phase accommodating approximately 800 to 850 spaces and the second phase increasing the capacity of the parking facilities to accommodate a total of 1,200 parking spaces.

Demolition

The proposed demolition would consist of removal of all currently existing features at the project site associated with the MUNI facilities, including the structure, foundation, pavement, asphalt, fencing, and remnants of former tracks. However, the existing retaining walls along 23rd Street and San Bruno Avenue would be retained. There are currently no above ground storage tanks, although nine underground storage tanks were removed from the site in 1987. It is unknown if there are additional underground storage tanks, which would be removed as part of demolition. Groundwater monitoring wells and equipment associated with hazardous materials remediation would remain on the site and would be accessible through any building foundation or pavement.

The existing single building consists of a one- and two-story section on a concrete floor along Utah Street and a one-story section on 23rd Street, with a total gross area of about 54,000 square feet. Sections of the building are of un-reinforced brick-walled construction, plastered on the exterior, with a wooden-truss roof structure covered with metal. There is no vegetation on site. The building is not rated for architectural or historical significance, and the San Francisco Landmarks Preservation Advisory Board did not find that the building warranted protection as an historic structure. It is not located in a conservation district.

The existing building and site are currently used as headquarters for the MUNI Ways and Structures Division, which is responsible for building and track maintenance. About 103 employees are assigned to the site,

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[8] Harding Lawson Associates, 1990. Draft Letter from James Ordons, Project Geologist, Harding Lawson Associates to Mr. Larry James, Project Manager, Public Utilities Commission regarding proposal for Phase III Product Recovery/Remedial Action Feasibility Study, 24th and Utah Maintenance Facility, San Francisco, California dated September 6, 1990.

[9] Nakamura, Scott, 1992. Telephone communication with Scott Nakamura, San Francisco Department of Public Health, March 9, 1992.

although their actual work locations vary throughout the City at various MUNI facilities; about 15 to 20 employees work on site during a typical work day. About 25 MUNI vehicles park on site. The entire MUNI facilities and operations are planned to be relocated to an existing vacant warehouse.[10]

Parking Facilities

Phase 1. The first phase of construction would include a six-level parking structure with the capacity of approximately 750 to 780 spaces and a surface parking lot with about 50 to 70 spaces, yielding a total parking capacity of approximately 800 to 850 spaces for the entire site. In this EIR, it is assumed that Phase 1 of construction would provide 850 spaces as a worst-case assumption.

The parking structure would be located on the northern two thirds of the site, and the surface lot on the southern one third. The main entrance/exit to the site would be located on 24th Street, and there would be a secondary access on 23rd Street. About half of the parking spaces on the site would be designed as standard-size stalls, and the other half would be compact stalls, with 32 handicapped-designated stalls inside the parking structure. A portion of the structure would be designed with sufficient height to accommodate special van parking.

The Phase 1 parking garage would be a six-level structure with rooftop parking. There would be about 1½ to 2 levels below grade on the northern portion of the structure, comparable to the existing MUNI structure, while the surface lot would be at grade, since the site slopes downhill from northeast to southwest. Thus, the 24th Street access would be at grade, while the 23rd Street access would be at the third level of the parking structure. Pedestrian access to and from the garage would be available from three points: near the northwest corner of the structure from the second level; near the northeast corner of the structure from the third level; and from the surface lot on the southern end of the site just west of the main entrance.

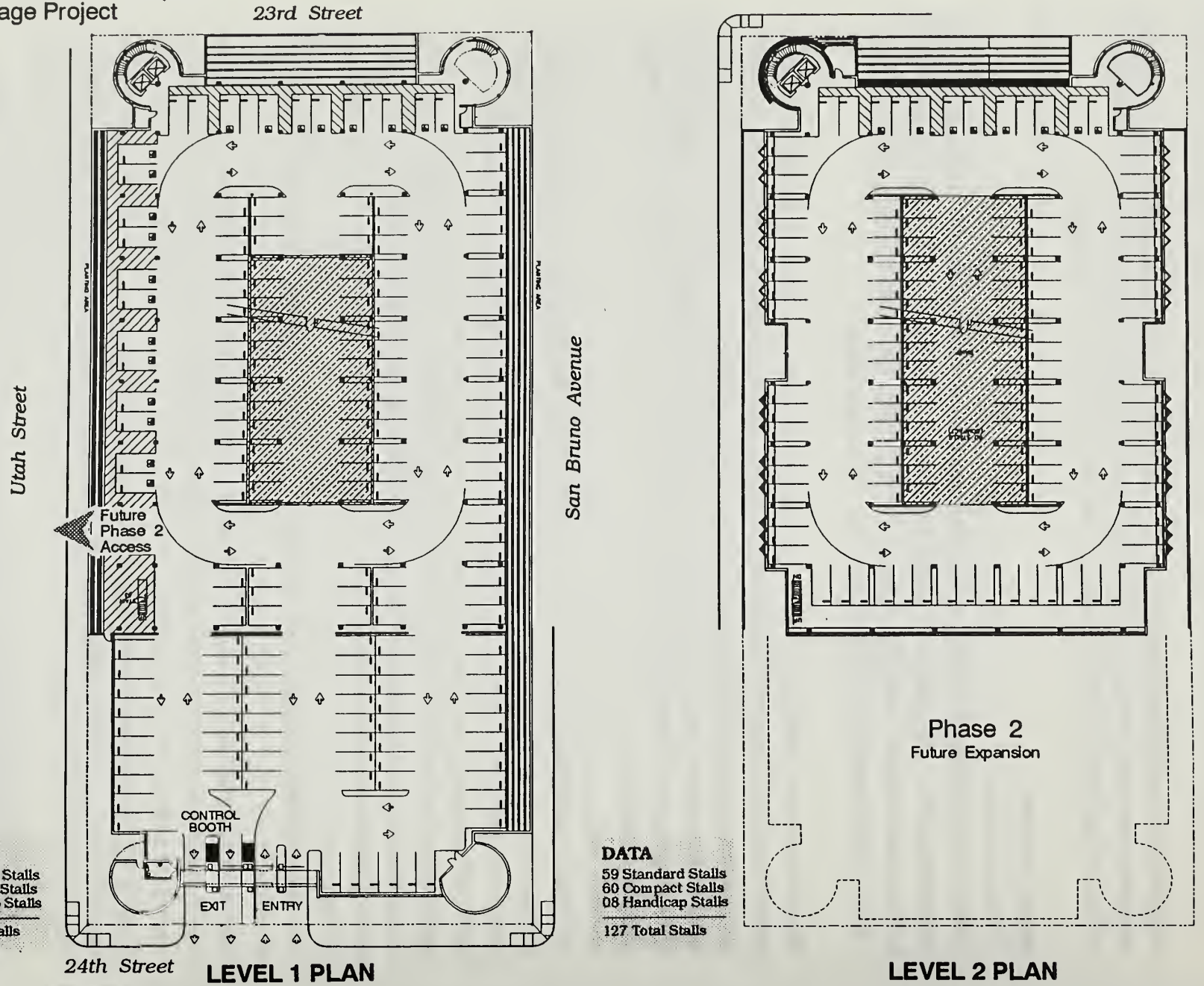
The maximum height of the structure as measured under the City Planning Code would be 40 feet to the finish floor of the roof, not including the parapet, guard rails or elevator towers. Due to the sloping topography, this "maximum" height may include averaging at certain points of measurement. The total gross area of the Phase 1 structure would be about 300,000 square feet, with approximately 350 square feet required per parking stall, and a Floor Area Ratio (FAR) of 3.75. The structure and surface lot would cover the entire 80,000-square-foot lot and would be setback approximately 11 to 13 feet from the sidewalk on all sides. Figures 3, 4, and 5 depict the floor plans for all levels of the parking garage, with the surface lot shown on the level one floor plan.

[10] Katz, John, MUNI Transit Planner, 1992.

LEVELS 1 & 2 FLOOR PLAN

San Francisco General Hospital
Parking Garage Project

FIGURE 3



DATA
86 Standard Stalls
45 Compact Stalls
23 Handicap Stalls
154 Total Stalls

LEVEL 1 PLAN

DATA
59 Standard Stalls
60 Compact Stalls
08 Handicap Stalls
127 Total Stalls

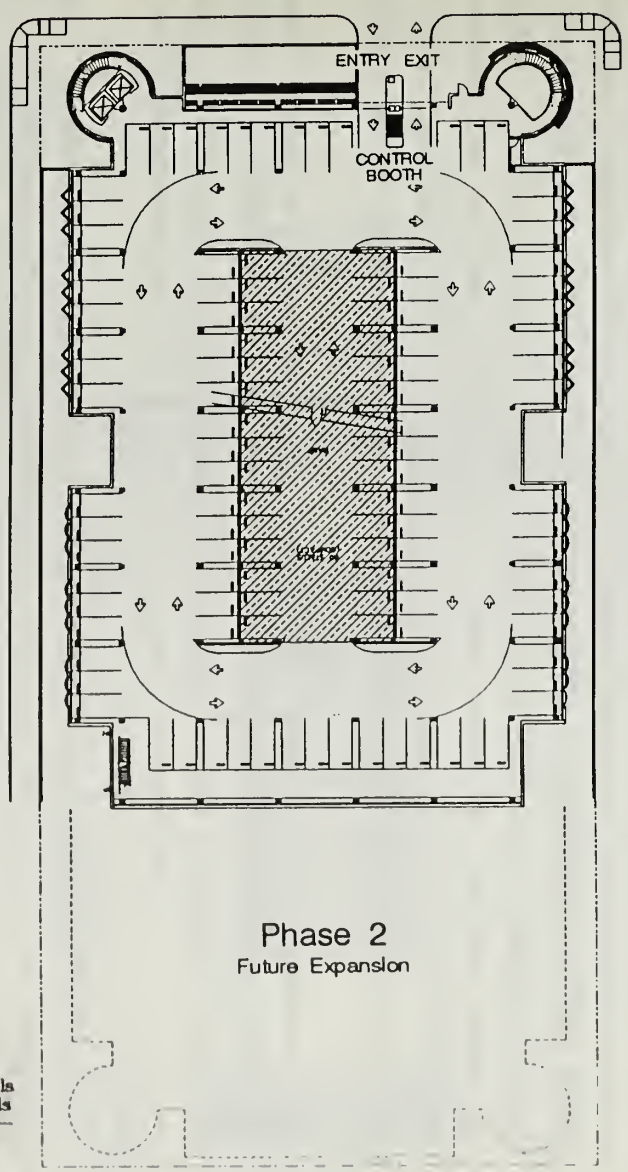
LEVEL 2 PLAN

Source : Fong and Chan Architects, 1992

LEVELS 3 & 4 FLOOR PLAN

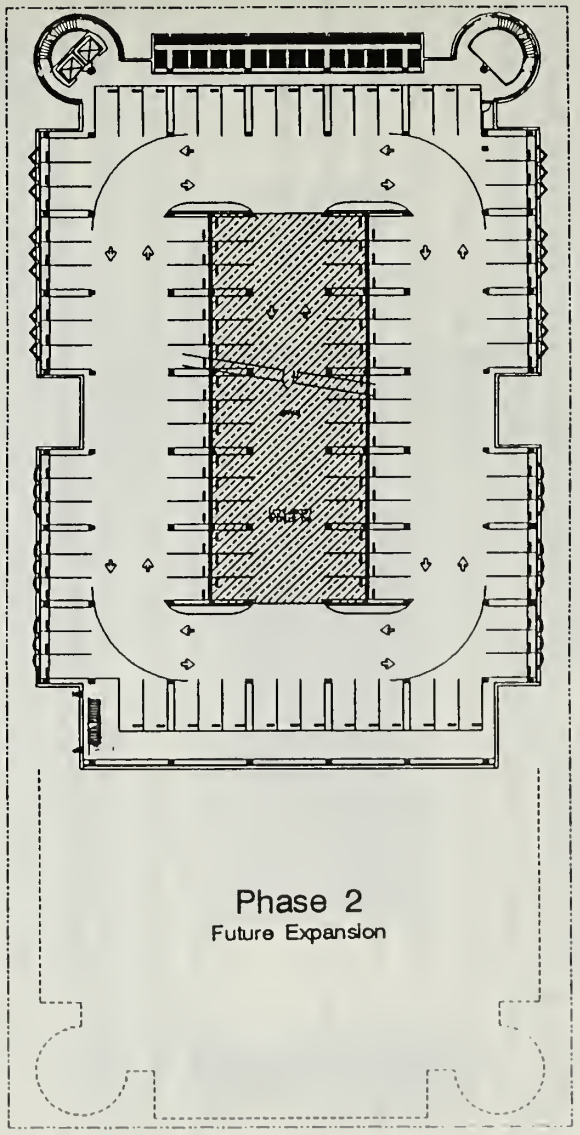
San Francisco General Hospital
Parking Garage Project

FIGURE 4



DATA
67 Standard Stalls
60 Compact Stalls
127 Total Stalls

LEVEL 3 PLAN



DATA
70 Standard Stalls
60 Compact Stalls
130 Total Stalls

LEVEL 4 PLAN

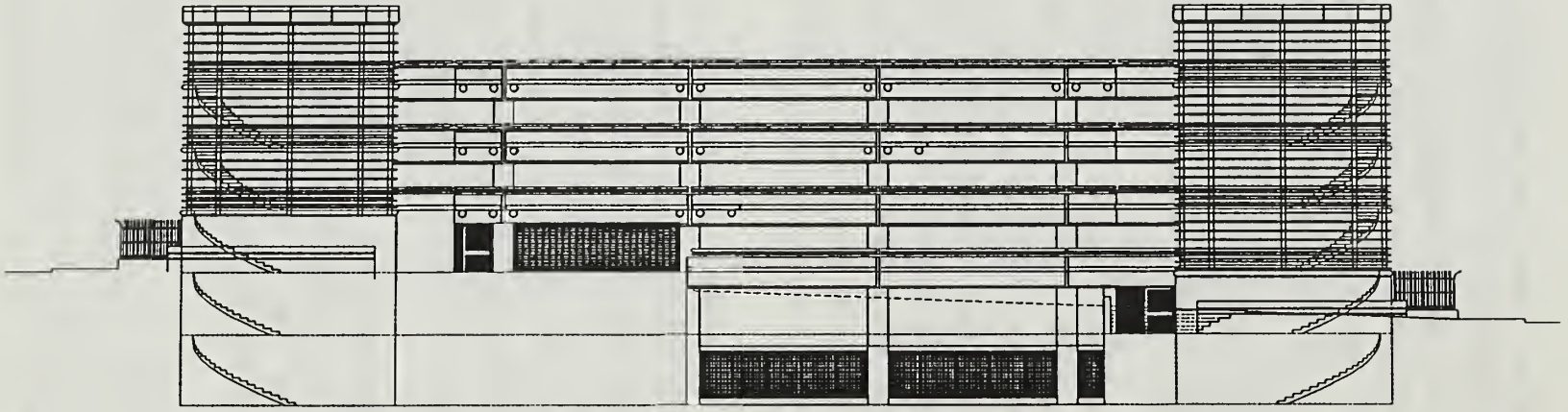
NO SCALE

Source : Fong and Chan Architects, 1992

BUILDING ELEVATION, NORTH

San Francisco General Hospital
Parking Garage Project

FIGURE 6

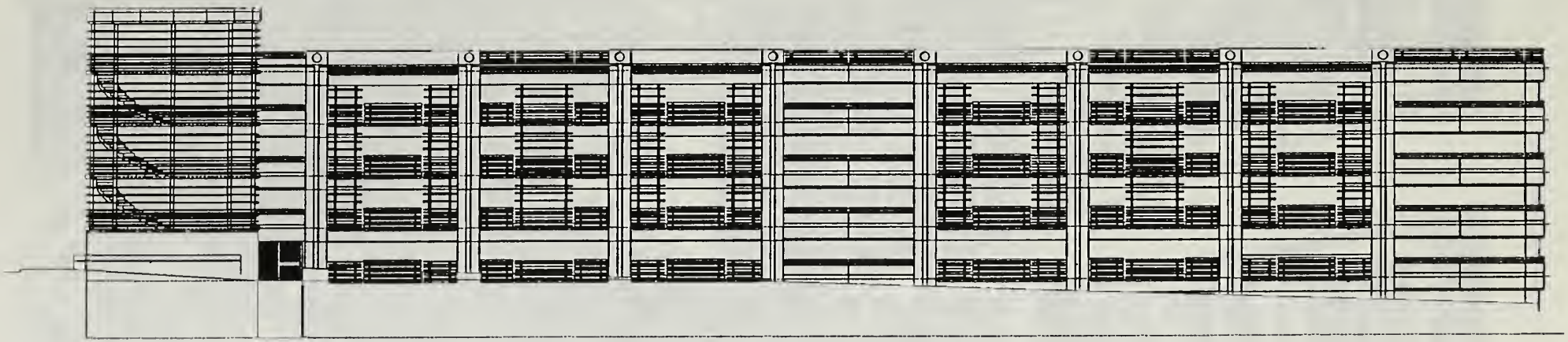


NORTH ELEVATION

NO SCALE

BUILDING ELEVATION, WEST
San Francisco General Hospital
Parking Garage Project

FIGURE 7



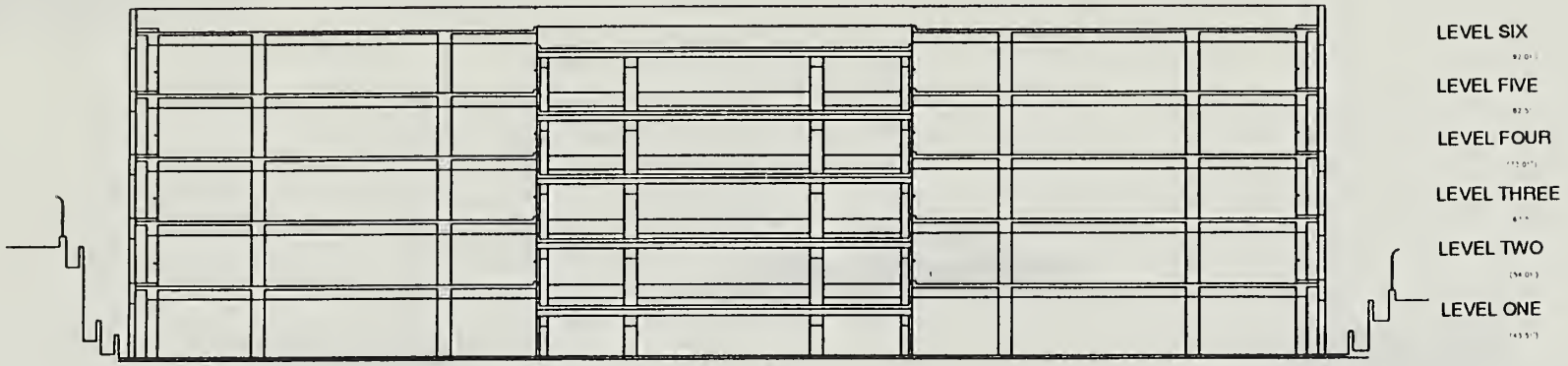
WEST ELEVATION
NO SCALE

Source : Fong and Chan Architects, 1992

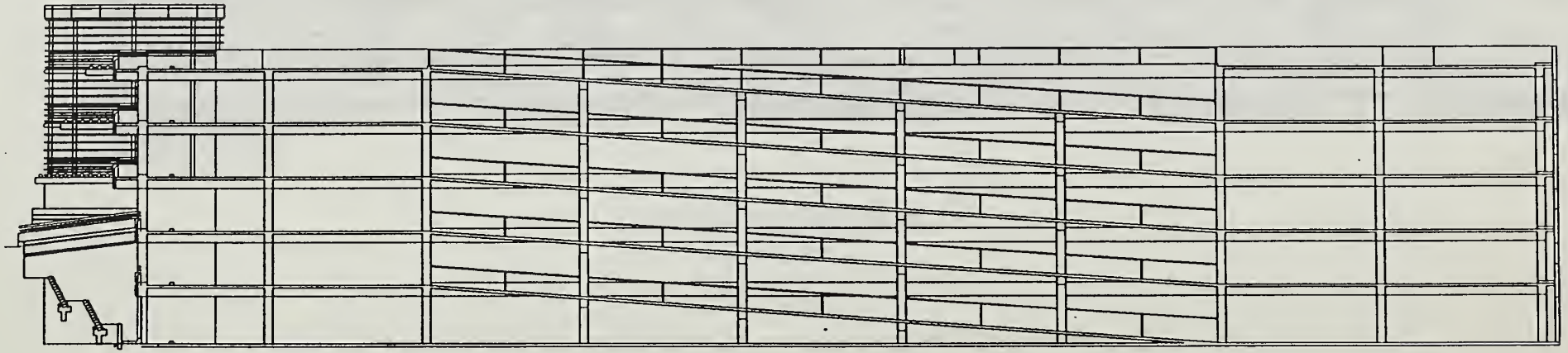
BUILDING SECTION, EAST-WEST AND NORTH-SOUTH

FIGURE 8

San Francisco General Hospital
Parking Garage Project



EAST-WEST BUILDING SECTION
NO SCALE



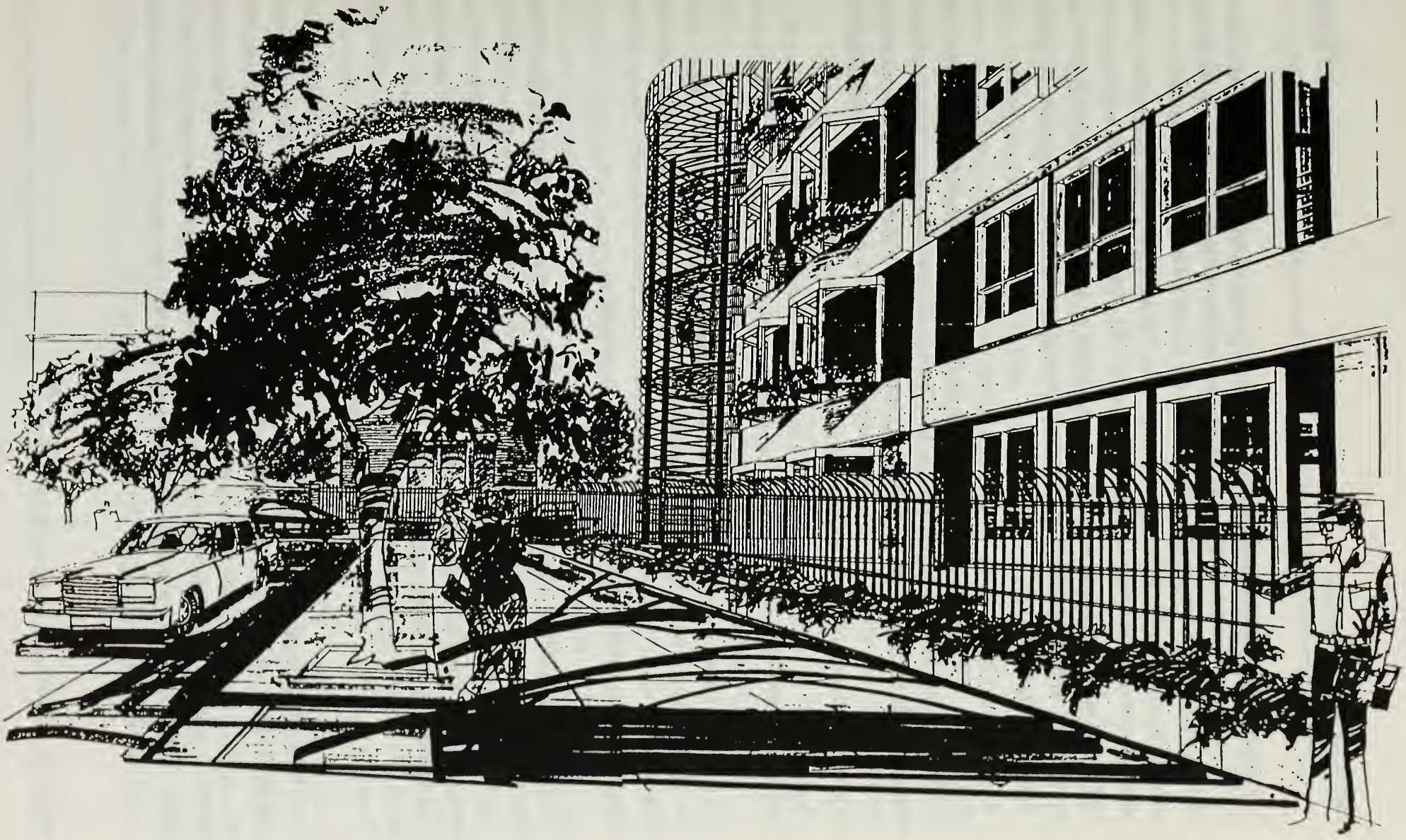
NORTH-SOUTH BUILDING SECTION
NO SCALE

Source : Fong and Chan Architects, 1992

ARCHITECTURAL RENDERING

San Francisco General Hospital
Parking Garage Project

FIGURE 9



Source : Fong and Chan Architects, 1992

as in Phase 1, the structure would extend southward on the site to 24th Street with circular stair towers on the corners. The maximum height of the structures would be about 60 feet above street level at the stair tower at the corner of 24th and Utah streets, but the overall building would still comply with the 40-foot height limit as measured under the City Planning Code. The total gross area for the entire structure would be about 450,000 square feet, and the FAR would be 5.63. There would be an additional future access constructed in the Phase 2 portion of the garage, located on Utah Street, to accommodate the increased flow of traffic. Operation of the Phase 1 parking structure could be maintained during construction of the Phase 2 parking structure.

Landscaping. Landscaping would be provided in the planting areas within the 11-foot setback between the face of the garage and the sidewalk. Along Utah Street and San Bruno Avenue, there would be low-lying, drought-resistant shrubbery. Along 23rd Street, the planting area setback would step down with each level, and there would be some type of cascading plants here. Street trees would be planted along the sidewalk around the perimeter of the site approximately every 25 feet, except in the driveway areas.

Proposed Operation

The proposed garage would be in operation 24 hours per day, with an attendant on duty at all times. A number of the spaces would be leased to monthly users, primarily for hospital staff, and the remainder would be available for use by the community, and hospital visitors and other hospital staff. Fees would be charged for parking in the garage, but rates have not yet been established.

For the Phase 1 structure, the 24th Street gate would be the only vehicle access to the parking lot and garage except at night, with generally two entry and two exit lanes. During the morning peak commute hours from 7 to 9 AM, there would be three entry lanes to the parking lot and one exit lane; in the afternoon peak hours from 4 to 6 PM, the reverse would occur, with three lanes for exiting the parking lot and one lane for entering. The 24th Street access would be closed at night for security, when the 23rd Street access would be the only access to the garage. For the Phase 2 structure, there would be an additional access located on Utah Street, and the operation of this access would be determined during Phase 2 planning.

The Department of Parking and Traffic has stated their intention to work closely with the neighborhood to establish an appropriate two-hour residential parking permit (RPP) area in the residential areas surrounding the hospital. It is expected that the program would be in place by the time the first phase of the parking garage is completed. The RPP area would limit the on-street parking for anyone without a permit to two hours. Residents of the area would be able to purchase permit stickers that allows them to park on the

street for longer periods of time. On-street parking would also be re-established around the perimeter of the site, possibly controlled by meters.

Construction Schedule and Cost

Construction activities would be restricted to daytime, weekdays only. Since the project would use the existing topography, excavation requirements would be limited to that needed for demolition and removal of the existing the foundation and subsurface facilities, for development of the garage foundation and elevator system, and for level grading of the site. Demolition of the existing facilities is antlcipated to require three to four months, and construction of the first phase parking garage would require about 14 months. The total construction period for Phase 1 would be about 18 months. The Phase 1 parking structure is planned to be in operation by July 1994, concurrent with the scheduled completion of the Mental Health Skilled Nursing Facility.

Estimated construction cost of the proposed parking facility is about $12.8 million for Phase 1, and approximately $19.2 milllon is estimated for the total construction costs for both phases. At this time, funds have been secured only for Phase 1 of the project, and no schedule has been established for Phase 2.

PROJECT APPROVALS

Following a public hearing on this Draft EIR before the City Planning Commission, responses to written and oral comments will be prepared; this EIR will be revised accordingly and presented to the City Planning Commission for certification as to accuracy, objectivity and completeness. No permits may be issued before the Final EIR is certified.

The Bureau of Building Inspection would require demolition and building permits if the proposed project is approved. The proposed project would also require a Master Plan Referral and approval of the Arts Commission for a public structure and approval of the Parking and Traffic Commission.

On November 14, 1986, the voters of San Francisco passed Proposition M, the Accountable Planning Initiative, adopted as Section 101.1 of the City Planning Code. Proposition M establishes eight Priority Policies. These policies are: preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project which

requires an Initial Study under CEQA or adopting any zoning ordinance or development agreement, the City is required to find that the proposed project or legislation is consistent with the Priority Policies and is consistent with the City's Master Plan. The City Planning Commission, in its decision regarding the proposed project approval or disapproval, would make a determination of the project's conformance with the Priority Policies.

LAND USE PLANS AND POLICIES

San Francisco Master Plan

Transportation Element. The Master Plan of the City and County of San Francisco outlines the objectives and policies which dictate new development within the City and County of San Francisco. The Transportation Element of the San Francisco Master Plan includes a Citywide Parking Plan. This plan contains a number of objectives and policies that relate to the proposed parking structure project. The objectives of the Parking Plan address the need to reduce the traffic and parking impacts of institutions on surrounding residential areas. At the same time, objectives call for the need to provide new or enlarged parking facilities while not adversely affecting the livability and desirability of the City and its various neighborhoods. Policies outline the need and the locational and design criteria that proposed parking facilities must meet. These policies are presented below:

Objective 10: *Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the City and its various neighborhoods.*

Policy 1: *Assume that new or enlarged parking facilities meet need, locational and design criteria.*

Policy 2: *Discourage the proliferation of surface parking as an interim land use, particularly where sound residential, commercial or industrial buildings would be demolished pending other development.*

Policy 4: *In any large development, allocate a portion of the off-street parking spaces for compact automobiles.*

Policy 5: *Make existing and new accessory parking available to the general public for use as short-term or evening parking when not being utilized by the business or institution to which it is accessory.*

Objective 11: *Contain and lessen the traffic and parking impact of institutions on surrounding residential areas.*

Policy 1: *Limit the provision of long-term parking facilities at institutions and encourage such institutions to regulate existing facilities to assure use by short-term clients and visitors.*

Objective 12: *Relate the amount of parking in residential areas to the capacity of the City's street system and land use patterns.*

Policy 3: *Protect residential neighborhoods from the parking impacts of nearby traffic generators.*

Urban Design Element. The Urban Design Element of the Master Plan of the City and County of San Francisco[11] establishes objectives and policies responding, in part, to the physical characteristics of new development. The Urban Design Element provides a framework for the evaluation of the effects of the proposed parking structure on the visual quality of the neighborhood. Objectives and policies which apply to the proposed parking structure project are presented below:

Objective 2: *Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding.*

Policy 6: *Respect the character of older development nearby in the design of new buildings.*

Objective 3: *Moderation of major new development to complement the city pattern, the resources to be conserved, and the neighborhood environment.*

Policy 1: *Promote harmony in the visual relationships and transitions between new and older buildings.*

Policy 2: *Avoid extreme contrast in color, shape, and other characteristics which will cause new buildings to stand out in excess of their public importance.*

Policy 4: *Promote building forms that will respect and improve the integrity of open spaces and other public areas.*

Policy 5: *Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.*

Policy 6: *Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.*

[11] City and County of San Francisco, Department of City Planning, no date. Urban Design, An Element of the Master Plan of the City and County of San Francisco.

Objective 4: *Improvement of the neighborhood environment to increase personal safety, comfort, pride and opportunity.*

Policy 12: *Install, promote and maintain landscaping in public and private areas.*

Policy 13: *Improve pedestrian areas by providing human scale and interest.*

Policy 14: *Remove and obscure distracting and cluttering elements.*

The Urban Design Element states that:

> "No other element in the street environment is more disrupting than exposed parking. Parking lots and open parking decks break the building facades and stand as large voids in visual interest. Exposed vehicles clutter the pedestrian's view and reduce the sidewalk to a narrow corridor between rows of automobiles. Parking should, wherever possible, be placed beneath or behind buildings or else screened from view by landscaping, walls or fences. The screening should be designed to restore to the street some of the visual interest that has been taken away by the removal of buildings."

Policy 15: *Protect the livability and character of residential properties from the intrusion of incompatible new buildings.*

The Urban Design Element elaborates on this policy, stating:

> "Human scale can be retained if new buildings, even large ones, avoid the appearance of massiveness by maintaining established building lines and providing human scale at their lower levels through use of texture and details."

San Francisco General Hospital Medical Center Institutional Master Plan

The San Francisco General Hospital Medical Center Institutional Master Plan (IMP), prepared in November 1987, identifies the hospital's growth needs and future development plans as they were defined at that time. The purpose of the IMP is to communicate identified needs and preferred methods of resolving those needs. The IMP describes: (1) background information regarding the nature of the facility, services provided, history of growth, and description of the physical plant; (2) short- and long-range development plans for future growth over at least the next 10 years; and (3) a study of the transportation, circulation, and parking needs of the facility.

The short-range plan identifies parking facilities as one of six development projects to meet the anticipated needs within the five years subsequent to preparation of the IMP, as follows: "Parking facilities to accommodate up to 1,200 cars with completion by 1990."

The IMP identifies the hospital campus's parking shortage as its most serious problem. In 1987, the hospital used 584 marked parking spaces within its campus. On a daily basis, SFGH must accommodate approximately 1,000 outpatients, 280 emergency room visits, 2,900 hospital employees, 900 university employees, and hospital visitors. As indicated in the Transportation Setting section in Chapter 3 of this EIR, surveys indicate that the 584 parking spaces within the campus are insufficient to meet the parking demand. Consequently, on-street parking in the neighborhoods surrounding the hospital is used to fill the unmet parking demand. This situation affects the residents and shopkeepers in these neighborhoods as well as the SFGH staff, patients and visitors.

The IMP examines four possible locations for the parking garage. One of the alternatives (referred to as Site A) evaluated in the IMP is the proposed project site, which is addressed throughout this EIR. The IMP also describes possible building configurations and sizes for this site, and they ranged from four to six levels with a maximum height of 45 feet on the 24th Street side and 25 feet on the 23rd Street side. The other three alternatives are discussed under the "Off-site Alternative" in the Alternatives section, Chapter 7, of this EIR.

San Francisco Planning Code (Section 727)

The 24th Street-Mission Neighborhood Commercial District (NCD) controls are designed to provide potential for new development consistent with the existing scale and character. Small-scale buildings and neighborhood-serving uses are encouraged, and most commercial uses are encouraged at the ground story. Service uses are permitted with some limitations at the second story. Special controls are necessary to preserve the unique mix of convenience and specialty commercial uses. In order to maintain convenience stores and protect adjacent livability, new bars and fast-food restaurants are prohibited, and limitations apply to the development and operation of ground-story full-service restaurants, take-out food and entertainment uses. Continuous retail frontage is maintained and encouraged by prohibiting most automobile and drive-up uses. Housing development in new buildings is encouraged above the ground story.

The project site is located just outside of the 24th Street-Mission NCD, and would not be subject to the NCD controls. Properties located along 24th Street to the south and west of the site are included in the NCD and are subject to these controls. Although the proposed project would not be subject to these controls, its proximity to the NCD could result in its influencing the character of the eastern margin of the NCD. NCD controls do not address the need to provide some transition or buffer between the larger-scale institutional uses and the smaller-scale NCD uses. In addition, the NCD's proximity to the SFGH campus and the need to relate the two land use patterns is not addressed by either the Planning Code or the SFGH Institutional Master Plan.

The cumulative effect of the proposed parking garage and the potential Gladstone development, discussed below, could affect adjacent uses. For example, these two developments could encourage future conversion of residential uses on the block west of the project site to hospital-related uses, even though these uses are not permitted under the current zoning and would require re-zoning. In addition, the relationship of the proposed project with the scale and character of the NCD would depend on how the project functions with or relate to the more pedestrian-oriented NCD. The proposed provision of the information kiosk at the southwest corner of the site would help tie the proposed garage to the NCD.

CUMULATIVE DEVELOPMENT

Two other planned or proposed developments in the project vicinity should be considered during the planning of the proposed SFGH parking garage with respect to cumulative development in the project vicinity. They are: the approved Mental Health Skilled Nursing Facility, and the proposed Gladstone Medical Research facility. These projects are considered as contributing to cumulative impacts analyzed in this EIR. In addition, it is assumed that there would be a 1% increase per year background growth in local traffic.

The San Francisco Department of Public Health is in the process of constructing a Mental Health Skilled Nursing Facility at the northern edge of the SFGH campus along Potrero Avenue between 20th and 21st streets. It will provide sub-acute mental health services locally at SFGH to replace out-of-county services. The development consists of two buildings with a total gross of 90,000 square feet on two and three levels, with a maximum height of 40 feet. Construction of the facility began in September 1992 and is anticipated to be completed by July 1994. More detailed information on the Mental Health Skilled Nursing Facility is available in the Final EIR which was certified in October 1990.[12]

The Gladstone Medical Research Facility is a proposed development to be located on a 40,280-square-foot site along 24th Street, Potrero Avenue and Utah Street. The preliminary conceptual project calls for approximately 104,000 square feet of medical laboratory and support services space and underground parking for approximately 100 to 331 vehicles. The project would require re-zoning and designation of a special use district for the site. A schedule has not yet been developed for the project, and environmental documentation has not yet been completed.

[12] City and County of San Francisco, Department of City Planning, 1990. *San Francisco General Hospital Mental Health Skilled Nursing Facility, Final Environmental Impact Report.* 88.089E. Certified October 25, 1990.

CHAPTER 3
ENVIRONMENTAL SETTING

Land Use

EXISTING LAND USES

The project site is located immediately south of the San Francisco General Hospital (SFGH) campus. It is currently used as the headquarters for the Municipal Railway (MUNI) Ways and Structures Division, which is responsible for building and track maintenance. Surrounding areas contain a mix of land uses including SFGH facilities to the north, residential uses to the northwest and east, a parking lot for the Gladstone Foundation Laboratories to the southwest, and neighborhood-serving commercial and community uses (e.g., restaurant, bar, church, community organization, etc.) to the south.

The SFGH Medical Center is an acute care city/county hospital licensed for 582 beds. It provides health care services to San Franciscans, including indigent and low-income persons. Through its affiliation with the University of California at San Francisco, it is also a teaching hospital. The hospital has had a strong institutional presence in the area since its relocation from Stockton Street to the present Potrero Avenue site in 1872. The SFGH Medical Center campus occupies two city blocks at the boundary of the Mission and Potrero Hill districts of San Francisco.[1] Highway 101, located one and one-half blocks east of the site, forms the western boundary of the Potrero Hill district. This district is characterized by the two- and three-story single-family homes.

The project vicinity comprises the western margin of the Potrero Hill District and includes the easternmost extension of the Mission District. The 24th Street-Mission Neighborhood Commercial District (NCD) extends between Bartlett Street and San Bruno Avenue. However, between Utah Street and San Bruno Avenue, it only includes the street frontage on the south side of 24th Street (south of the project site). To the west of Utah Street, street frontage on both sides of 24th Street are included in the NCD. The 24th Street-Mission NCD provides convenience goods to its immediate neighborhood as well as some goods and services to a wider trade area. There are Latin American restaurants, grocery stores, bakeries and gift stores. The businesses are generally open during the day, and restaurants and a movie theater are active during the evening. Dwelling units are frequently located above the ground-story commercial uses; and the Planning

[1]City and County of San Francisco, Department of Planning, 1990. *San Francisco General Hospital Mental Health Skilled Nursing Facility Final Environmental Impact Report (88.089E).*

Code encourages continuation of this pattern.[2] Residential uses in the project vicinity generally consist of two- and three-story residences. Existing land uses are indicated on Figure 10.

ZONING

The project site comprises all of Assessor's Block 4213. This block is zoned "P" for public uses (Figure 11).[3] Building heights at the site are limited to 40 feet. Properties within the project vicinity are zoned for residential, commercial, and public uses. Facilities associated with the SFGH are located to the north (north of 23rd Street), and this area is also zoned "P" for public uses. Properties to the west (west of Utah Street and south of 23rd Street) and northeast (east of San Bruno Avenue and south of 23rd Street) are zoned "RH-2" allowing for two-family residential uses (two dwellings per lot; up to one unit per 1,500 square feet).

Properties to the southeast (east of San Bruno Avenue and north of 24th Street) are within the "RM-1" zoning district which allows for mixed, low-density residential uses (one dwelling unit per 800 square feet of lot area). To the south and southwest of the site, properties are zoned for neighborhood commercial uses. The building height limit on all properties surrounding the site is 40 feet except for the SFGH facilities where the height limit is 105 feet.

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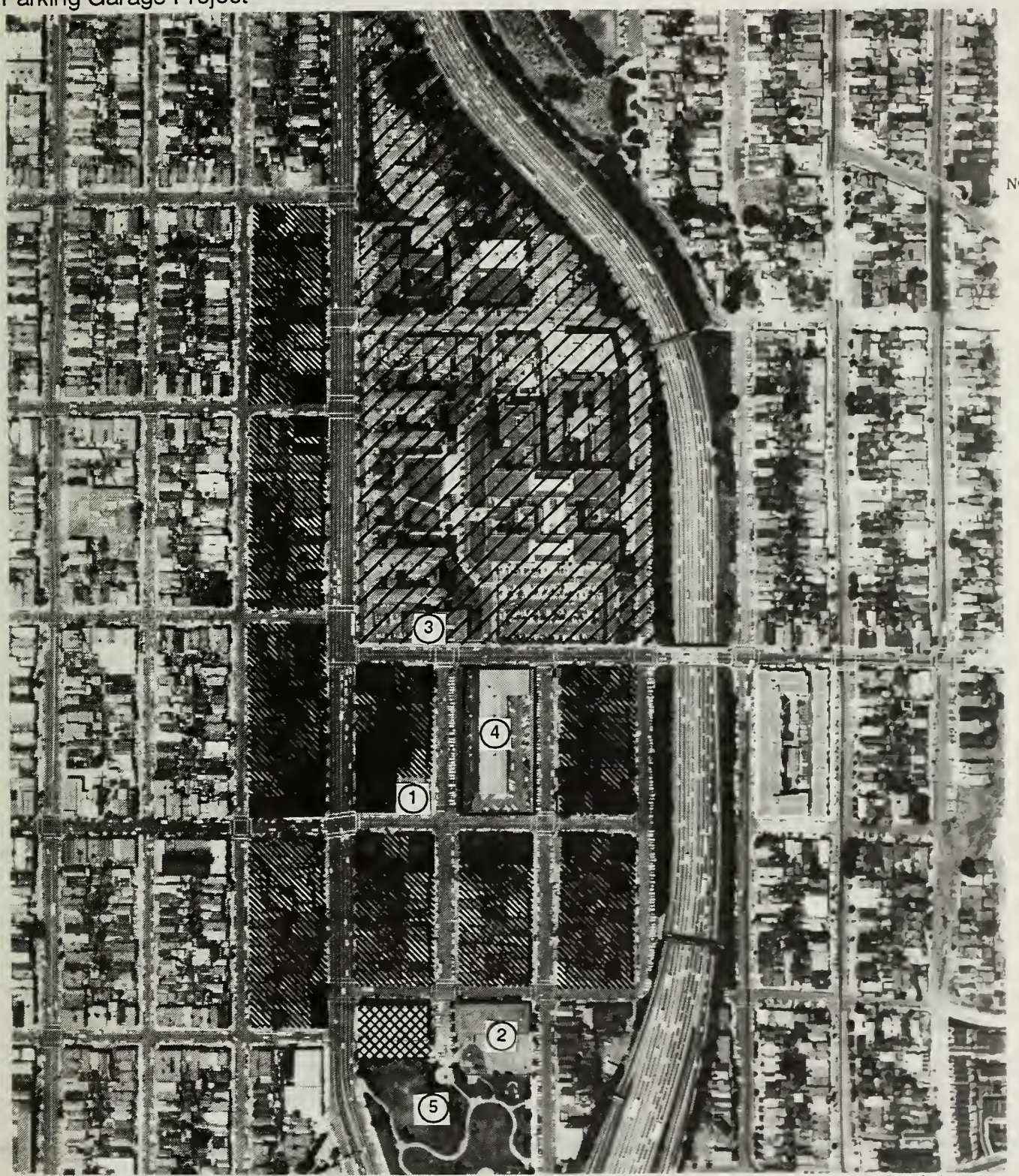
[2]City and County of San Francisco, 1989. *San Francisco Planning Code, Section 727.1.* June.

[3]City and County of San Francisco, 1990. *Zoning Maps, City and County of San Francisco Municipal Code.* September 30.

LAND USES IN SITE PROJECT VICINITY

FIGURE 10

San Francisco General Hospital
Parking Garage Project



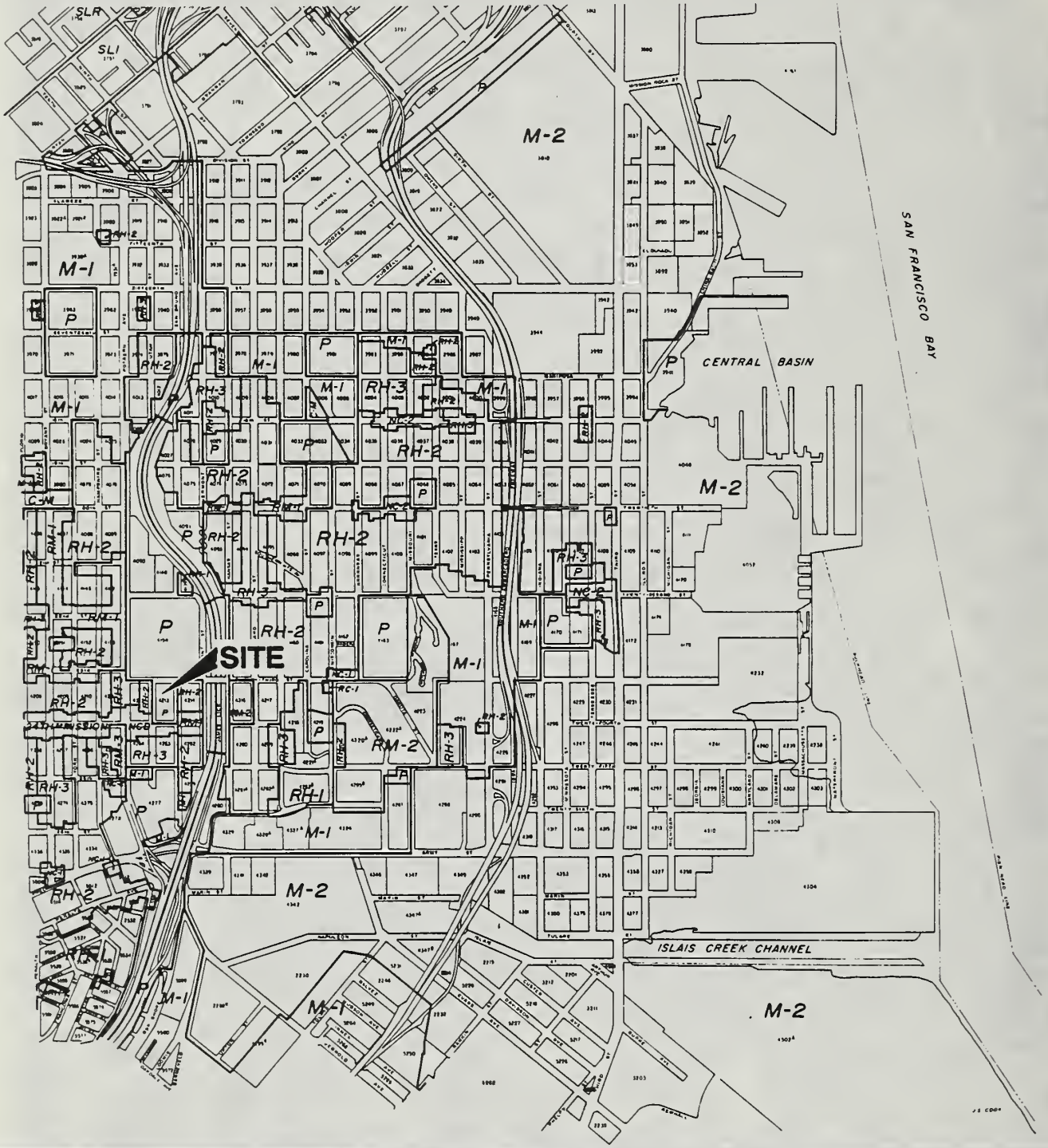
LEGEND :

- Neighborhood Commercial (first Floor Only) or Community Uses
- SFGH Facilities
- Residential Areas
- Office Uses

1. Gladstone Foundation Laboratories Parking Lot
2. Buena Vista School
3. Gladstone Administration Building
4. Muni Facility (Project Site)
5. Knudsen Bloom

ZONING
San Francisco General Hospital
Parking Garage Project

FIGURE 11



HOUSE CHARACTER DISTRICTS
RH-1(D) | RH-1 | RH-1(S) | RH-2 | RH-3

MIXED HOUSE & APARTMENT CHARACTER DISTRICTS
RM-1 | RM-2 | RM-3 | RM-4

RESIDENTIAL-COMMERCIAL COMBINED DISTRICTS
RC-3 | RC-4

COMMERCIAL DISTRICTS
C-2 | C-3-O | C-3-R | C-3-G | C-3-S | C-M

INDUSTRIAL DISTRICTS
M-1 | M-2

PUBLIC DISTRICT
P

NEIGHBORHOOD COMMERCIAL DISTRICTS
NC-1 | NC-2 | NC-3 | NC-S | NCD

SOUTH OF MARKET
RED | SLI | SLR | SSO

SAN FRANCISCO MUNICIPAL CODE
PART II, CHAPTER II, SECTION 209
WITH AMENDMENTS TO 8 INCLUDING
JUNE 1990

NORTH
0 FEET 800

Source : City and County of San Francisco, 1990

Transportation, Circulation and Parking

The Transportation, Circulation and Parking analysis conducted for the proposed SFGH parking garage has relied substantially on two previous studies conducted for SFGH: *Traffic Study for San Francisco General Hospital Mental Health and Parking Garages* by William Marconi (September 1989),[1] and *San Francisco General Hospital Mental Health Facility Parking and TSM Analysis* by Dowling Patterson Associates (February 1990).[2] The William Marconi study provided basic traffic data for the analysis, including existing volumes, trip generation assumptions, Level-of-Service calculations, and cumulative project information. The Dowling Patterson Associates study provided parking demand information as well as TSM results and strategies that were incorporated into this analysis. In addition, a previous study conducted by DKS Associates entitled *San Francisco General Hospital Medical Center Master Plan Update Transportation Study* (November 1987)[3] was utilized for parking and comparison data. These studies are referenced throughout the Transportation Setting and Impacts sections in Chapters 3 and 4 of this report.

EXISTING TRAFFIC CONDITIONS

Street Network

The proposed SFGH parking garage would be served by a "grid network" of streets. The proposed project site is bounded by 23rd Street on the north, 24th Street on the south, Utah Street on the west, and San Bruno Avenue on the east. Major north-south access to the project area is provided by Potrero Avenue located immediately west of the hospital. Major east-west access to the area is provided by Army Street which is located about three blocks south of the project site. Other key streets that provide access in the project area include 25th Street, Vermont Street, and 22nd and 21st streets.

East-West Streets. 23rd Street is oriented in an east-west direction along the northern boundary of the project site. At Potrero Avenue, there is an offset between the 23rd Street approach legs, with the western leg intersecting Potrero north of the eastern leg. From the project site, 23rd Street continues east over U.S. Highway 101 into the Potrero Hill residential area. On the west side of Potrero Avenue, 23rd Street provides

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[1] Marconi, William, 1989. *Traffic Study for San Francisco General Hospital Mental Health Facility and Parking Garages*. September 12, 1989.

[2] Dowling Patterson Associates, 1990. *San Francisco General Hospital Mental Health Facility Parking and TSM Analysis*. February 1990.

[3] DKS Associates, 1987. *San Francisco General Hospital Medical Center, Master Plan Update, Transportation Study*. November 1987.

access to commercial and residential areas in the Mission District. In the study area, 23rd Street has one travel lane in each direction and parking on both sides of the street. 23rd Street provides the only street crossing of U.S. Highway 101 between Army Street and 17th Street.

Twenty-fourth (24th) Street travels in an east-west direction along the southern boundary of the project site, with one travel lane in each direction and parking allowed on both sides of the roadway. In the project vicinity, 21st, 22nd, and 25th streets are all oriented in an east-west direction and intersect Potrero Avenue. Both 21st and 22nd streets are offset at their intersections with Potrero Avenue. These streets have one travel lane in each direction with curbside parking on both sides.

Army Street is located approximately three blocks south of the project site. Army Street is designated as a "Major Thoroughfare" in the Transportation Element of the City's Comprehensive Plan and is oriented in an east-west direction.[4] With three travel lanes in each direction, Army Street provides important access west to the Mission District as well as east towards waterfront areas. Army Street also provides the area's main access to U.S. Highway 101.

North-South Streets. Utah Street and San Bruno Avenue travel in a north-south direction between the Knudsen Bloom Park and 23rd Street. They are the western and eastern boundaries of the project site, respectively. These roadways provide access to Knudsen Bloom Park and northward toward SFGH. Both Utah Street and San Bruno Avenue have one travel lane in each direction with curb parking on both sides. Vermont Street connects with 22nd and 25th streets along the east perimeter of SFGH. This two-lane street parallels the west side of U.S. Highway 101.

Potrero Avenue is also designated as a "Major Thoroughfare" in the Transportation Element of the City's Comprehensive Plan.[5] As such, this roadway provides access to downtown areas (south of Market Street) as well as freeway access to and from U.S. Highway 101. In the project area, Potrero Avenue has three travel lanes in each direction and provides direct access to SFGH. Vehicle parking is allowed in limited areas along the thoroughfare.

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[4] City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan, Transportation Element.*

[5] City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan, Transportation Element.*

Regional access to the project site is provided by U.S. Highway 101. U.S. Highway 101 is a multi-lane freeway providing access south to San Jose and north to Marin County. Near the project site southbound and northbound freeway access is available via the Army Street-Potrero Avenue interchange.

Intersection Operation

The following intersections in the study area were evaluated for PM peak hour (4:30 to 5:30 PM) operating conditions:

Potrero Avenue/21st Street
Potrero Avenue/22nd Street (eastside)
Potrero Avenue/22nd Street (westside)
Potrero Avenue/23rd Street
Potrero Avenue/24th Street
Potrero Avenue/25th Street (eastside)
Potrero Avenue/25th Street (westside)
Utah Street/23rd Street
San Bruno Avenue/23rd Street
Vermont Street/23rd Street
Kansas Street/23rd Street
Utah Street/24th Street
San Bruno Avenue/24th Street

The intersections of Potrero/21st, Potrero/22nd, Potrero/23rd, Potrero/24th, and Potrero/25th are all signalized. The remaining intersections are stop-sign controlled. Based on 1989 conditions, all signalized intersections in the study area are functioning at acceptable levels (LOS "B", see Appendix B) or better during the PM peak hour. The intersection of Potrero/23rd experiences westbound vehicle queuing on 23rd Street. This occurs particularly during shift changes, which adds to congestion at this location. All unsignalized intersections are also currently operating at acceptable levels (LOS "A", see Appendix B) during the PM peak hour. Existing PM peak hour traffic volumes and distribution of turning movements at these intersections are included in Appendix B.

Effects of San Francisco Freeway Closures

The traffic conditions described above are based upon traffic flows prior to the October 1989 Loma Prieta earthquake. That earthquake caused the partial closures of Interstate 280 and U.S. Highway 101 (the Central Freeway), and resulted in the possible diversion of some of the freeway traffic to Potrero Avenue. To test this possibility, the intersections of Potrero/21st and Potrero/25th were counted in October 1991 during the PM peak hour.[6] These counts indicate that 1991 through-volumes on Potrero Avenue have increased substantially compared to the 1989 counted volumes. At the Potrero/25th intersection, southbound through-traffic (accessing the U.S. Highway 101 southbound on-ramp) is congested, with

[6] Omni-Means, Ltd., 1991. Traffic counts taken on October 29, 1991.

queues extending through the intersection due to external factors (i.e., single on-ramp lane, congested freeway volumes). With a "gridlock" situation, traffic volumes at this intersection would not give a representative account of potential volume increases. However, at the Potrero/21st intersection through-traffic along Potrero Avenue is unencumbered by external factors. Through-volumes counted in 1991 at this location have increased by 49% over the 1989 counted volumes. This comparison suggests that the Loma Prieta earthquake may have indeed affected people's travel patterns. Consequently, there has been a measurable diversion of traffic to the Potrero Avenue corridor.

It should be noted that Caltrans plans to renovate Interstate 280 and the extension from Highway 101 to the downtown area, and it is scheduled to be partially reopened as of January 1993.[7] However, only one lane in each direction will be opened, and northbound motorists on Highway 101 will not be able to take Interstate 280 into the downtown area due to the connector ramp remaining closed. The entire project will not be completed until June 1994. The analyzed traffic conditions in this study have been based on pre-earthquake counts. In using these counts, the assumption has been made that travel patterns in the project study area would approach "normal" pre-earthquake conditions by the time the project is completed. However, it may take several years after freeway construction is completed for travel patterns to revert back to "normal". New travel patterns may also evolve in the wake of the freeway closure as time passes.

TRANSIT SERVICES

Within a four-block walking distance (about 1,000 to 1,600 feet) of the proposed SFGH parking garage, there are six MUNI bus lines (see Figure 12). These MUNI bus lines include Routes 9, 19, 27, 33, 48, and 53. The Routes 9 and 33 are located on Potrero Avenue directly west of the project site. The Route 27 line is located about four blocks to the west on Bryant Street. East of the project site, MUNI line 53 is located on Vermont Street, while MUNI line 19 travels on Rhode Island Street. The 48 MUNI line travels in an east-west direction on 23rd Street. A brief description of each line follows:

MUNI Line 9: This route travels from the Ferry Building along Potrero Avenue to the Visitacion Valley area. During the commute hours headways are every eight minutes.

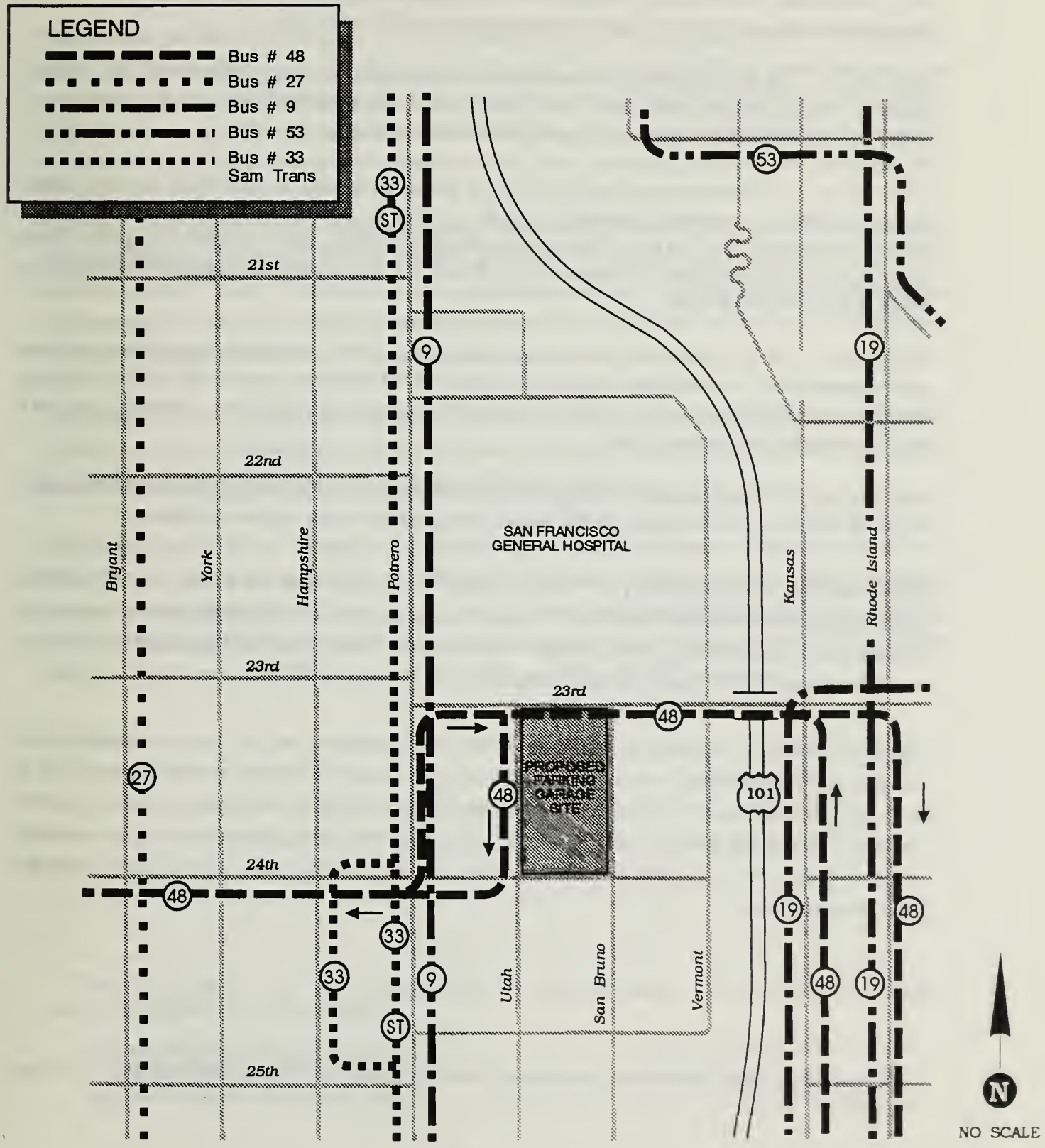
MUNI Line 19: This route travels between the Hunters Point Naval Shipyard and the Transbay Terminal. Located on the east side of U.S. Highway 101, line 19 travels southbound on Rhode Island Street and northbound on DeHaro Street. A bus stop is located at the intersection of 23rd/Rhode Island. Headways are ten minutes during the AM commute hours and 15 minutes during the PM peak hour.

[7] Sherman, Earl, 1992. Telephone communication with Earl Sherman, Caltrans Information, August 26, 1992.

MUNI TRANSIT MAP

FIGURE 12

San Francisco General Hospital
Parking Garage Project



Source : Omni-Means, 1992

MUNI Line 27: This route travels from the Mission District to Market Street and Van Ness Avenue. In the project study area, line 27 travels on Bryant Street with stops at 23rd Street. Headways are 12 minutes during the AM peak hour and 15 minutes during the PM peak hour.

MUNI Line 33: This route travels from Potrero/25th to California Street near Children's Hospital. Line 33 travels on Potrero Avenue directly west of the project site. A bus terminal is located in the vicinity of the project at 25th Street and Hampshire. Headways are every 20 minutes all day.

MUNI Line 48: This route passes directly through the project study area on 23rd Street and 24th Street. Currently, MUNI is considering re-routing Line 48 in order to bypass the traffic congestion at the Potrero/23rd intersection. The new proposed route would have MUNI Line 48 inbound turning left on Utah Street, right on 24th Street and back across Potrero. Should this route change be approved, implementation would occur in the fall of 1992.

MUNI Line 53: This is a community service route travelling between the Potrero Hill area and Mission Street near Valencia Street. A pedestrian overcrossing exists from the northeast corner of the SFGH campus to 22nd Street. Located east of U.S. Highway 101, Line 53 travels on Vermont Street. Headways are every 30 minutes during the commute hours.

Samtrans Line 7B. This route travels between the South Bay (Redwood City) and downtown San Francisco. Route 7B travels on Potrero Avenue in the project study area with stops adjacent to the site.

MUNI bus lines travelling directly on Potrero Avenue have stops near the project site. There are approximately four northbound stops and three southbound stops within a three-block area of the site. In addition, MUNI lines travelling in an east-west direction on 23rd Street have one eastbound stop and two westbound stops within a two-block area of the site.

Based on information supplied by the MUNI Scheduling Department, the only bus line operating near capacity in the project study area is the 9 San Bruno Line.[8] During the morning commute period (7:00 to 9:00 AM), this bus line is at a capacity of 1.14. (Capacity is defined as all seats being occupied plus 50% standees.) During the evening commute period (4:00 to 6:00 PM), the bus line is operating at a capacity of 1.04. All other MUNI bus lines in the project study area are operating with excess capacity during the peak commute hours.

[8] Fossa, Bob, 1992. Telephone communication with Bob Fossa, MUNI Scheduling Department, October 15, 1991.

TRAVEL CHARACTERISTICS

The Updated Transportation Study of the SFGH Institutional Master Plan indicates that SFGH currently has about 3,000 full-time employees on campus on a daily basis.[9] Approximately 12% of these employees are physicians, 18% nurses, 25% office workers, 12% administrators, 15% technicians, 5% professors, 5% service staff, and the remaining 8% fall into other various categories. Although there are some shift overlaps, the basic proportions of employees are 75% (2,490) day shift, 13% (445) swing shift, and 12% (365) night shift.

The travel mode characteristics for employees and visitors have been taken from a survey conducted for the SFGH Mental Health Facility Parking and TSM Analysis.[10] The survey was conducted in 1989 and its results are shown in Table 1. The predominant mode of transportation to and from the hospital campus for employees is by automobile, including those who drive alone and rideshare. For visitors, the predominant mode of transportation is transit.

The distribution of trip origins for employees and visitors are shown in Table 2. As indicated, about 60% of the trip origins are from within the City of San Francisco. Most of the remaining trips are from the Peninsula and East Bay, with about 5% of the employees from the North Bay.

The hospital has an ongoing Transportation Systems Management (TSM) program. As part of this program, SFGH has such programs as the sale of MUNI, BART, AC Transit, Samtrans, and Golden Gate Transit passes. The hospital provides a shuttle service to other medical institutions within San Francisco, including the free SFGH-24th BART shuttle. SFGH also promotes a ridesharing program for employees whereby the location of employees' residences is used to match with persons wishing to rideshare.[11]

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[9] DKS Associates, 1987. *San Francisco General Hospital Medical Center Master Plan Update Transportation Study*. November 1987.

[10] Dowling Patterson Associates, 1990.

[11] Dowling Patterson Associates, 1990.

TABLE 1

TRAVEL MODE SPLITS FOR SFGH EMPLOYEES AND VISITORS

Transit Mode	Employees	Visitors
Auto		36%
Drive Alone	59%	
Rideshare	10%	
Transit	25%	53%
Other	6%	11%
TOTAL	100%	100%

Source: Dowling Patterson Associates, 1990. *San Francisco General Hospital Mental Health Facility Parking and TSM Analysis*. February, 1990.

TABLE 2

DISTRIBUTION OF SFGH EMPLOYEE TRIP ORIGINS

Location	Employees
San Francisco	60%
Peninsula	18%
East Bay	17%
North Bay	5%
TOTAL	100%

Source: Kaplan, McLaughlin, Diaz, 1987. *San Francisco General Hospital Medical Center, Institutional Master Plan*. November 1987.

PARKING

Parking Surveys

Information regarding existing parking occupancy conditions is based on a survey conducted for the SFGH Mental Health Facility Parking and TSM Analysis.[12] Within a three-block radius of the SFGH campus, approximately 40 blocks were surveyed over a two-day period by Bendix Environmental Research in June of 1989. These surveys were conducted at 1:00 PM and 4:00 PM on a weekday. The peak 1:00 PM parking conditions are summarized in Figure 13, and more detailed parking information is included in Appendix B.

The survey found that the peak demand for parking occurred during the one-o'clock hour. There was a total supply of 2,115 on-street parking spaces, of which 2,000 spaces were occupied. The survey also indicated that illegal parking was common.

Off-street parking is available on the SFGH campus. There are a total of 584 parking spaces on the campus, of which 112 spaces are reserved for visitor parking. Due to an excess demand for parking on-campus, vehicles are parked illegally on various lots and streets in the campus area. At the time of the survey, there were 156 illegally parked vehicles on campus.[13] The total number of parked vehicles on-campus is 740, and during the early afternoon hours (1:00 to 3:00 PM), these parking spaces were 100% occupied.

For the purpose of this study, the 156 illegally parked vehicles on-site will not be included in the overall total of on-site parking spaces. Since these vehicles are illegally parked, their "spaces" are not considered part of the existing supply of 584 parking spaces for visitors and employees.

Parking Demand

The SFGH's existing peak parking demand was estimated based on previous calculations done for the SFGH Mental Health Facility Parking and TSM Analysis.[14] As shown in Table 3, the total calculated existing parking demand is about 1,650 spaces for both employees and visitors. Based on the total number of available on-site parking spaces, this can further be divided into off-site and on-site demand. Of the 1,650 spaces, the on-site demand would be 584 spaces (35%), with 1,066 spaces (65%) of off-site demand.

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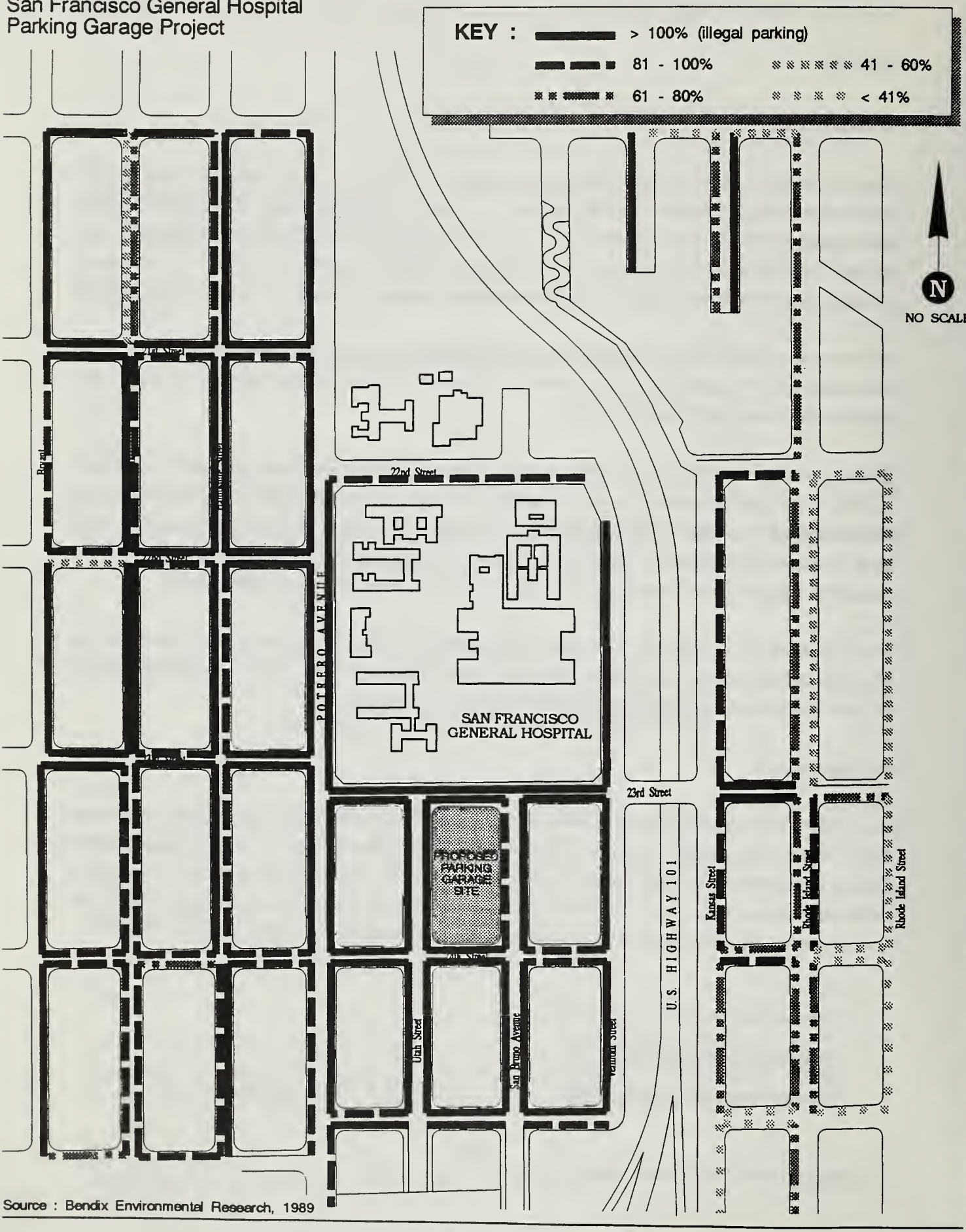
[12] Dowling Patterson Associates, 1990.

[13] Dowling Patterson Associates, 1990.

[14] Dowling Patterson Associates, 1990.

EXISTING PARKING OCCUPANCY (1:00 PM, WEEKDAY) FIGURE 13

San Francisco General Hospital
Parking Garage Project



Source : Bendix Environmental Research, 1989

TABLE 3

EXISTING SFGH PARKING DEMAND CALCULATION

Employees			Visitors		
Total Employees on Payroll		4,300	Total Visitors (24 Hrs)		3,200
% Daily Employees	82.5%		% Daytime Visitors	70.0%	
Daily Workers		3,550	Daytime Visitors		2,240
% Day Shift	79.1%		Peak Period	41.0%	
Day Shift Workers		2,810	Peak Daytime Visitors		920
Avg. % day shift, on-site	85.0%		% Travel by Car	36.0%	
Day Workers on-site		2,390	Peak Daytime Visitors by Car		330
			% Not Dropped Off	74.0%	
			Peak Daytime Visitors not dropped off		240

% Employees By Mode

	% Employees	Vehicles			
Drive Alone:	58.8%	1,410			
Carpool (3/veh.):	3.4%	30	Persons/Vehicle	1.15	
Vanpool (12/veh.):	0.8%	0			
Dropped Off:	6.3%	0			
Total Vehicles =		1,440	Total Vehicles =		210

Total Existing Parking Demand: 1,440 (Employees) + 210 (Visitors) = 1,650

Source: Dowling Patterson Associates, 1990. *SFGH Mental Health Facility Parking and TSM Analysis.* February, 1990.

The parking demand analysis was based on updated parking surveys conducted for the above referenced study. This is in relation to the 1987 parking surveys conducted for the SFGH Institutional Master Plan Update. It should be noted that the parking demand analysis conducted for the 1987 SFGH Institutional Master Plan calculated a higher demand (1,910 spaces).[15] The difference between the two parking demand calculations can be traced to the percentage of drive-alone employees. The 1987 Institutional Master Plan analysis had 72.1% drive-alone employees compared to 58.8% for the 1989 updated study. The 1989 updated study had more responses (2,015 compared to 976) than the 1987 analysis. To be consistent with the updated travel surveys, the calculated existing demand of 1,650 spaces will be used for this study.

[15] DKS Associates, 1987.

Noise

EXISTING NOISE CONDITIONS

The existing noise conditions in the vicinity of the hospital are dominated by vehicular traffic noise. The Environmental Protection Element of the San Francisco Master Plan identifies Potrero Avenue (located west of the project site and SFGH campus) and U.S. 101, the James Lick Freeway (located east of the site and SFGH campus), as the main traffic thoroughfares in the project vicinity. This Element also indicates that in 1974, the day-night average noise level (Ldn) on Potrero Avenue was 70 dBA, while on U.S. 101 it was 75 dBA in the project vicinity.[1, 2] Noise measurements taken at the site on April 25 and 26, 1991 indicate that noise levels along the northern project boundary (at 40 feet from the centerline of San Bruno Avenue) are approximately 64 dBA (Ldn). Noise measurement locations are indicated on Figure 14. Noise levels measured at the four measurement locations were as follows:

Location	Noise Level, Leq[3]	Noise Level, Lmax[3]
#1, 24th Street	63.3 dBA (Leq)	76.0 dBA (Lmax)
#2, Utah Street	60.6 dBA (Leq)	72.0 dBA (Lmax)
#3, 23rd Street	74.6 dBA (Leq)[4]	99.0 dBA (Lmax)[4]
#4, San Bruno Avenue (24-hour)[5]	63.8 dBA (Ldn)	100.5 dBA (Lmax)

[1] City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan. Environmental Protection Element.*

[2] dBA is a measure of sound in units of decibels (dB) on the A-weighted scale. The A-weighted decibel scale simulates the response of the human ear to various frequencies of sound.

Ldn, a day-night average noise level, represents a cumulative measure in decibels (dBA) of community noise during a 24-hour period. It applies weighting factors to account for people's lower tolerance to noise during the night (10 PM to 7 AM).

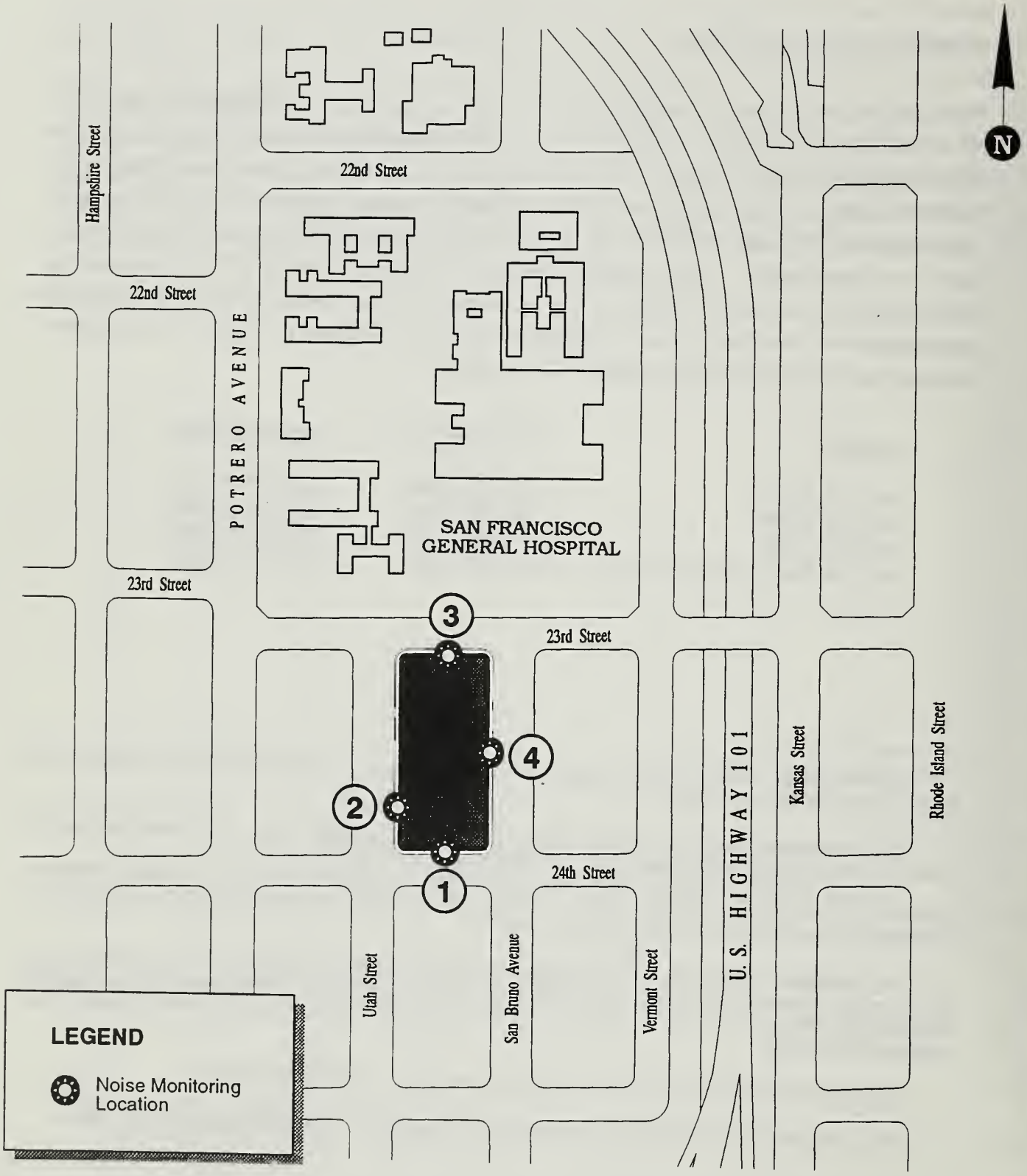
[3] Leq, equivalent sound level, is a single value of sound level for any desired duration, which includes all time-varying sound energy occurring during the measurement period. The measurement period for Locations #2, #3, and #4 was 15 minutes. Lmax is the maximum noise level measured during the measurement period.

[4] Elevated noise level resulted from an ambulance with siren passing within 25 feet.

[5] Noise measurement location was approximately 40 feet from the centerline of San Bruno Avenue.

NOISE MONITORING LOCATIONS
San Francisco General Hospital
Parking Garage Project

FIGURE 14



Source : Orion Environmental Associates, 1992

SENSITIVE RECEPTORS

Some land uses are generally considered to be more sensitive to ambient noise levels than others due to the amount of noise exposure, the type of activity involved, and the potential for disruption and interference with those activities. These land uses, termed sensitive receptors, include hospitals, nursing homes, senior citizen centers, schools, and residences. The project site is located adjacent to the SFGH and residential uses. Residential uses are located to the west, south, and east, across the street from the project site. There is a Baptist church located in the neighborhood commercial storefronts to the south of the site, on the south side of 24th Street. The closest school is the Buena Vista School, located two blocks south of the site, on the south side of 25th Street. There are no libraries, nursing homes, or senior centers in the immediate project vicinity.

NOISE REGULATIONS

In the City, regulation of noise is stipulated in Article 29 of the Police Code, which states the City s policy is to prohibit unnecessary, excessive and offensive noises from all sources subject to police power. Sections 2907 and 2908 of Article 29 regulate construction equipment and construction work at night.

Section 2907(b) states it shall be unlawful for any person, including the City and County of San Francisco, to operate any powered construction equipment, regardless of age or date of acquisition, if the operation of such equipment emits noise at a level in excess of 80 dBA when measured at a distance of 100 feet from such equipment, or an equivalent sound level at some other convenient distance. Exemptions to this requirement include:

- impact tools and equipment with intake and exhaust mufflers recommended by the manufacturers and approved by the Director of Public Works as best accomplishing maximum noise attenuation; and

- pavement breakers and jackhammers equipped with acoustically attenuating shields or shrouds recommended by the manufacturers and approved by the Director of Public Works as best accomplishing maximum noise attenuation.

Section 2908 prohibits any person, between the hours of 8:00 PM of any day and 7:00 AM of the following day to erect, construct, demolish, excavate for, alter, or repair any building or structure if the noise level created is in excess of the ambient noise level by 5 dBA at the nearest property line unless a special permit therefor has been applied for and granted by the Director of Public Works.

Air Quality

METEOROLOGY AND CLIMATE

The Bay Area's climate, as with all of California coastal environs, is dominated by the strength and position of the semi-permanent high pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, and infrequent rainfall; it drives the cool daytime sea breeze and maintains comfortable humidities and ample sunshine. Temperatures in the San Francisco area average 58 degrees Fahrenheit annually, ranging from the mid-40s on winter mornings to the mid-70s in late summer afternoons. The strong onshore flow of wind in summer keeps cool air and frequent cloudiness over the Bay Area until September when the offshore Pacific high pressure center weakens and migrates southward. Warmest temperatures generally occur in September and October. Temperature extremes, reaching 90 degrees or dropping to freezing, are rare in San Francisco. Rainfall in San Francisco averages 18 inches per year and is confined primarily to the "wet" season from late October to early May. Except for occasional light drizzles from thick marine stratus clouds, summers are almost completely dry.

Winds in the project area display several characteristic regimes. During the day, especially in summer, winds are from the southwest-west at 10 to 14 miles per hour as air is funneled through the Golden Gate. At night, especially in winter, the land becomes cooler than the water and an offshore flow off the hills develops over portions of the area. In San Francisco, however, the marine intrusion is so strong that the onshore flow persists both day and night during the warmer months. In the vicinity of SFGH in both winter and summer, the background pollution upwind from the project area is generally sufficiently low such that the SFGH vicinity experiences excellent air quality and rarely exceed clean air standards.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act Amendments of 1970 established national ambient air quality standards with states retaining the option to adopt more stringent standards or to include other pollution species. Because California already had standards in existence before federal standards were established, and because of unique meteorological problems in the state, there is considerable diversity between state and federal standards currently in effect in California as shown in Appendix C.

The ambient air quality standards are the levels of air quality considered safe to protect the public health and welfare and incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, such as asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Hospital patients represent a sensitive receptor population, because of their often immuno-

suppressed condition, and their exposure to unhealthful air quality is a serious concern. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

AMBIENT AIR QUALITY

Existing and probable future levels of air quality in the SFGH project area can be inferred from ambient air quality measurements conducted by the Bay Area Air Quality Management District (BAAQMD) at its two San Francisco air monitoring stations. The Potrero Hill station at 10 Arkansas Street measures all criteria pollutants, including regional pollutants such as ozone as well as primary vehicular pollutants near busy roadways such as carbon monoxide. The station at 939 Ellis Street at the BAAQMD headquarters measures only carbon monoxide. Appendix C includes a table summarizing the last six years of published data (1985 to 1990) from these monitoring stations. Final data for 1991 are not yet available. The monitoring data indicate that air pollution levels are relatively low in the project area.

Photochemical smog (ozone) levels in the City have not exceeded the hourly state or federal standards in the last six years of published data. However, the Bay Area Air Basin has been designated as a non-attainment area for ozone, and San Francisco, like all other sub-regions in the Bay area, contributes to the regional air quality problems. Although ozone levels locally in San Francisco are in compliance with state and federal standards, ozone standards are violated most often in the Santa Clara, Livermore and Diablo valleys due to local topography and meteorological conditions.

Measurements of carbon monoxide (CO) at the Potrero Hill station show low baseline levels, with the hourly maximum at less than 50% of the allowable California standard. Similarly, maximum 8-hour CO levels are several parts per million below their allowable 8-hour exposure. Carbon monoxide measurements at the 939 Ellis Street station showed violations of the most stringent hourly state standard for CO in 1985, and violations of the most stringent 8-hour CO standards as recently as 1988. However, the data from the Potrero Hill monitoring station are more representative of conditions at the project site compared to the data from the Ellis Street station, since 10 Arkansas is about 3/4 mile from the SFGH project site compared to about 2-1/4 miles for the Ellis Street station. Thus, violations of the hourly or 8-hour CO standards have not likely occurred in the project vicinity for the past six years. Nevertheless, the Bay Area Air Basin has been designated as a non-attainment area for carbon monoxide, and it should be noted that within San Francisco, there have been occasional local exceedances of state and federal CO standards.

Nitrogen dioxide and particulate sulfate measurements are within allowable maximum concentrations. These data suggest that limited additional emissions could be accommodated within localized City micro-environments as long as the magnitude of the localized increases are not overly severe.

Airborne dust levels measured in San Francisco show that they may exceed the former state total suspended particulate (TSP) standard, but measurement in excess of the former national TSP standard has not been recorded in the planning area since before 1982. The TSP standard has been replaced by an inhalable dust standard for particles of 10-micron in diameter or smaller, known as PM_{10}. PM_{10} measurements began in 1986 at the 10 Arkansas monitoring station. Occasional violations of the California PM_{10} standards have occurred and maximum PM_{10} levels have increased over the six-year period. One federal standard violation occurred in 1990; federal guidelines allow for no more than one violation per year averaged over a three-year period in defining a "non-attainment" area.

AIR QUALITY PLANNING

The 1977 Clean Air Act required that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards within the deadlines specified in the Clean Air Act. For the Bay Area Air Basin, the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), and the BAAQMD jointly prepared a Bay Area Air Quality Plan in 1982 which predicted attainment of all national clean air standards within the basin by 1987. However, violation of the national hourly ozone standard in the basin have occurred on the average of five to ten days per year in the last four years, and the federal 8-hour CO standard continues to be violated in certain areas throughout the air basin, including San Jose, Vallejo and some parts of downtown San Francisco. Therefore, the San Francisco Bay Area Air Basin is still considered a non-attainment area for ozone and carbon monoxide.

The 1989 California Clean Air Act (AB-2595) and Clean Air Act Amendments of 1990 both require development of air quality plans and strategies to reduce ozone and carbon monoxide levels in the Bay Area. As a result, a more recent Bay Area Clean Air Plan was prepared in 1991, which mandates a 5% per year air quality improvement. Attainment of air quality standards in the Bay Area has not yet occurred, since emissions reductions as required by the 1991 Clean Air Plan are continually offset by new emissions from population and industry growth in the basin.

The 1991 Bay Area Clean Air Plan contains specific measures aimed to reduce indirect sources of emissions, including transportation control measures designed to reduce the contribution of the automobile as the single-most important contributor to degraded air quality. Any project which attracts automobile traffic, such as a parking garage, is considered as a benefit to air quality only if it promotes or facilitates a mode shift away from the single occupant automobile as the primary means of transportation.

Visual Quality and Urban Design

SITE CHARACTERISTICS

At present, the Utah Street and 23rd Street frontages of the project site are lined by a one- and two-story stucco clad building. The two-story component is located at the corner of 24th Street and Utah Street. The building extends along the entire Utah Street and 23rd Street frontages, and the northern half of the San Bruno Avenue frontage. The remainder of the San Bruno Avenue and 24th Street frontages is comprised of a chain-link fence enclosing surface parking and storage. There are no street trees or other landscaping located on the project site or its street frontages.

The building was constructed in 1910 and is a representative example of early 20th century industrial vernacular architecture. The Utah Street section of the building was built in a Renaissance Revival style with round and segmental arches and pronounced moldings defining the windows of the two-story section. The 23rd Street section was built in the Mission Revival style signified by the stepped and curved parapet that defines the street elevation. A portion of the building on the interior of the site was reconstructed after a fire in 1952, and the modern addition has compromised the architectural integrity of the structure and the building has been determined to not warrant protection as an historic structure.[1, 2]

NEIGHBORHOOD CHARACTERISTICS

The project site is located in a mixed-use neighborhood which has residential, retail and service commercial, and light industrial uses and also public facilities. Most of the buildings in the neighborhood are wood-frame structures with stucco or wood siding and appear to date from about 1920 to 1940.

Along the south side of 24th Street across from the project site, two- and three-story buildings form a continuous "streetwall" with no setback from the sidewalk. The street elevation is punctuated by recessed entries, bay windows, overhanging signs, and varied cornice treatments. Commercial uses are located at street level and residential uses above. Parallel parking is permitted on both sides of 24th Street. The public right-of-way (including sidewalks and roadway) on 24th Street is 66 feet wide.

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[1]Woodbridge, Sally B. 1991. *Report on the Architectural Significance of the PUC/MUNI 24th and Utah Streets Property.*

[2] Malone, Jonathan H., Secretary to the Landmarks Preservation Advisory Board, 1988. Letter to Mr. Douglas G. Wright, Director, Planning and Development, Public Utilities Commission, regarding PUC/MUNI 24th and Utah Streets Property, Lot 1 in Assessor's Block 4213, dated May 10, 1988.

The block of San Bruno Avenue across from the project site is lined with two- to three-story single-family residences and apartments. In general, the dwellings are setback about 10 to 15 feet from the sidewalk, with street-level garages and second-floor entries. Parallel parking is permitted along the east side of San Bruno Avenue and 90° parking is permitted along the west side adjacent to the project site. San Bruno Avenue has an 80-foot right-of-way.

Utah Street, across from the project site, is lined with a surface parking lot enclosed by a chain link fence (southern half of block frontage) and two- to three-story residences. Most of the residences have garages at street level and second-floor entries. Parallel parking is permitted along the west side of the street, and 90° parking is permitted along the east side adjacent to the project site. Like San Bruno Street, Utah Street has an 80-foot right-of-way.

The SFGH is located on the north side of 23rd Street. The three-story Gladstone administration building is located across from the project site at the 23rd Street/Utah Street intersection. The building was constructed in 1915 and exhibits neo-Italian Renaissance architecture with a patterned-brick facade and terra cotta and marble detailing. The building is set back approximately 40 feet from the street. The eight-story Main Hospital is also located on the north side of 23rd Street, east of the Gladstone building. The Main Hospital is an eight-story, concrete structure and is set back about 200 feet from 23rd Street with a surface parking lot in the intervening space. This structure, designed in the "New Brutalis" Modern architectural style, was constructed in 1976.[3] A wrought iron fence with a brick ponywall and brick gateways lines the 23rd Street frontage of the hospital campus. The right-of-way on 23rd Street is 66 feet wide.

There are no street trees or landscaping on the project site and, excepting the hospital campus, landscaping in the neighborhood is sparse. Utah Street and 24th Street are devoid of street trees on either side of the street from the project site. There are four bottlebrush trees (*Callistemon sp.*) on the east side of San Bruno Avenue. The north side of the 23rd Street corridor in front of the Main Hospital is lined with sycamore trees (*Platanus sp.*) and evergreen shrubs.

[3] City and County of San Francisco, Department of Public Health, 1987. *San Francisco General Hospital Medical Center Institutional Master Plan,* Kaplan, McLaughlin, Diaz and Gordon H. Chong & Associates, November 1987.

VIEWS OF THE SITE

The project site is visible from street level and from buildings located across the streets from the site on all four sides. The site is also visible from locations up to two blocks away along the Utah Street and San Bruno Avenue corridors and one block away on the 23rd Street and 24th Street corridors. Distant views of the site are available from locations on the north- and east-facing hillsides of the Potrero Hill and Bernal Heights neighborhoods. From these distant locations, the site is not prominent and forms a small portion of the overall vista. Figure 15, Viewpoint Location Map, illustrates the locations from which the photographs of the site shown on Figures 16 and 17 were taken.

The upper photograph in Figure 16 shows a view of the site from the 24th Street/Utah Street intersection (View 1). This perspective illustrates the scale of the existing structure on the site relative to the commercial/residential buildings on 24th Street and the SFGH buildings in the background. The Utah Street frontage of the existing building is 400 feet long. The voids in the streetscape resulting from the parking lot on the northwest quadrant of the intersection and the surface parking on the 24th Street frontage of the site are also apparent in this photograph.

The lower photograph in Figure 16 shows a view of the site from the intersection of 23rd Street and Utah Street (View 2). The Mission-Revival style parapet walls along the 23rd Street frontage of the site are evident in this photograph. This photograph illustrates the contrast between the hospital and the existing maintenance facility in terms of scale, building style and materials, and streetscape treatments.

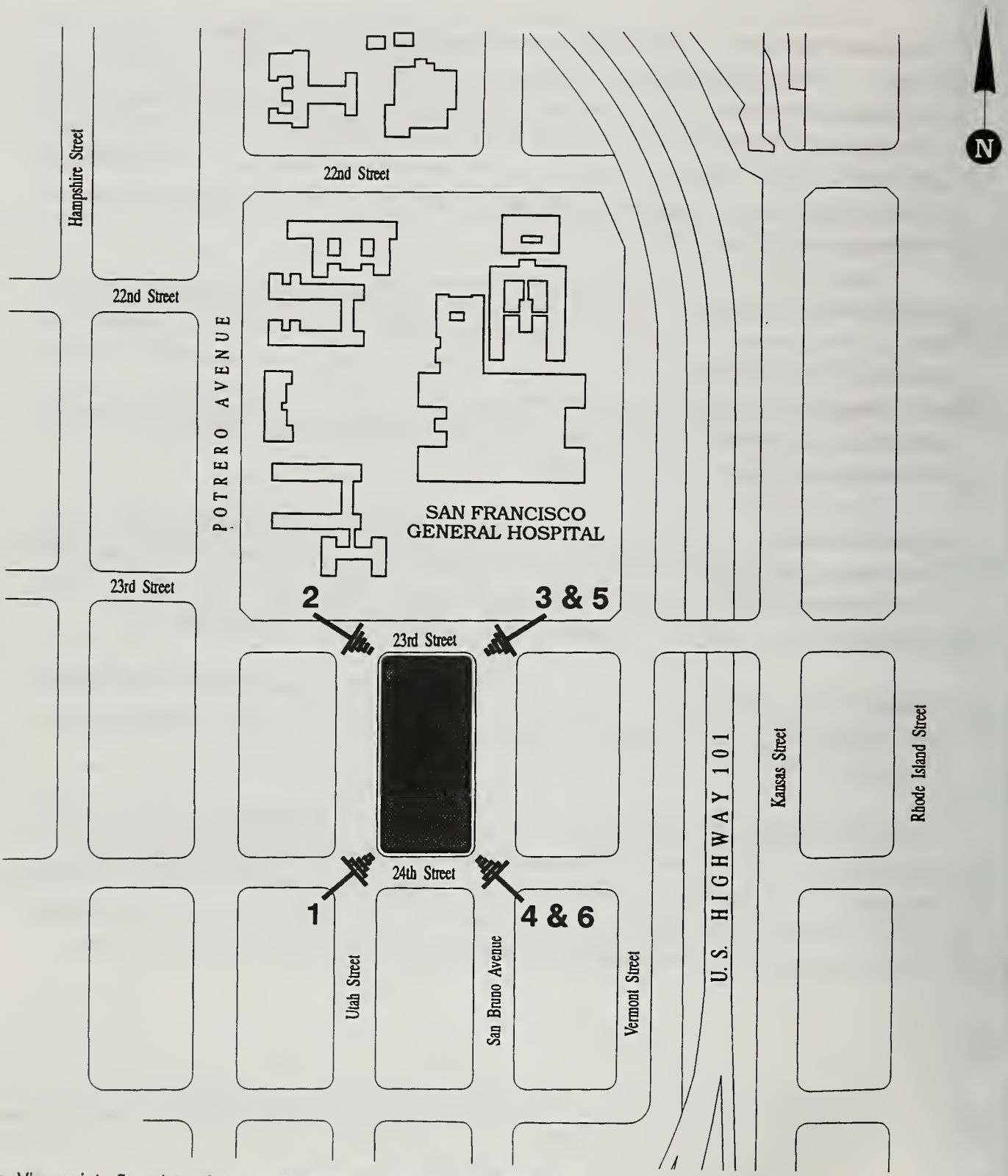
The upper photograph in Figure 17 shows a view of the site from the intersection of 23rd Street and San Bruno Avenue (View 3). Again, the scale of the existing on-site structure in relation to development across the street is shown.

The lower photograph in Figure 17 shows a view of the site from the intersection of 24th Street and San Bruno Avenue. From this vantage point, the surface parking and storage areas of the site are visible in the foreground, with the portion of the building which was reconstructed after the 1952 fire in the middle-ground of the photograph. Residences on 24th Street and San Bruno Avenue frame the photograph, providing a reference of the scale of existing development on the site relative to neighboring uses.

VIEWPOINT LOCATION MAP

San Francisco General Hospital
Parking Garage Project

FIGURE 15



Note: Viewpoints 5 and 6 refer to Figures 23 and 25, pages 108 and 110.

Source : Orion Environmental Associates, 1992

SITE PHOTOGRAPHS
San Francisco General Hospital
Parking Garage Project

FIGURE 16

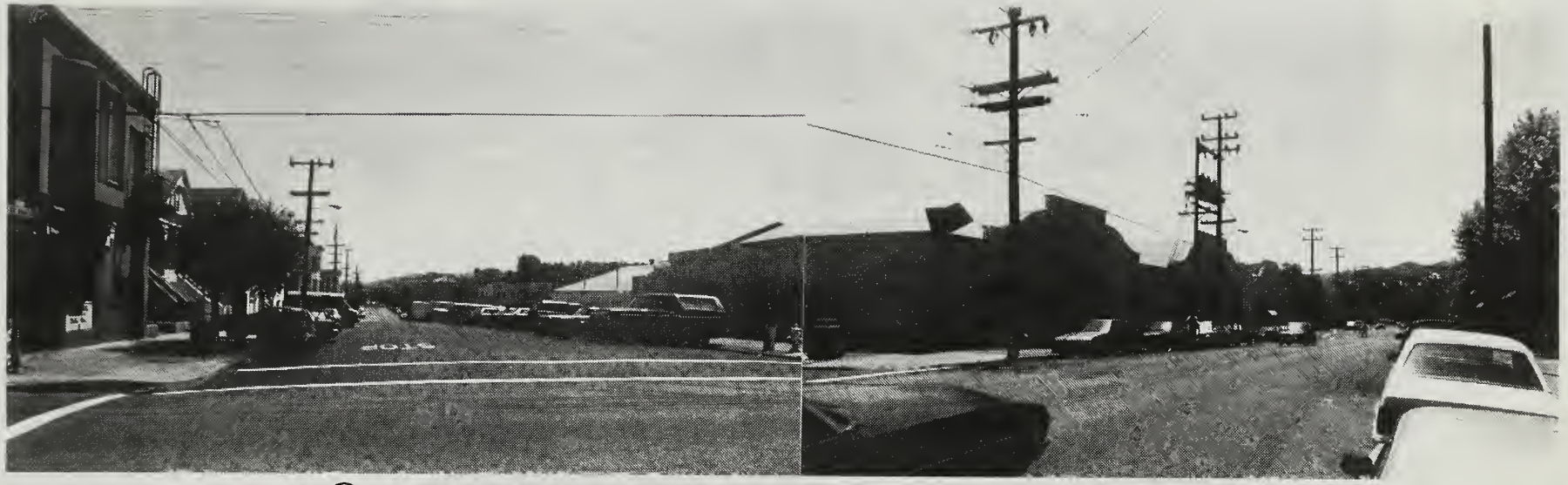
① VIEW FROM UTAH STREET AND 24th STREET

② VIEW FROM UTAH STREET AND 23rd STREET

Source . Henderson & Associates, 1992

SITE PHOTOGRAPHS
San Francisco General Hospital
Parking Garage Project

FIGURE 17



③VIEW FROM SAN BRUNO AVENUE AND 23rd STREET

④VIEW FROM SAN BRUNO AVENUE AND 24th STREET

Source : Henderson & Associates, 1992

Hazards --Public Health and Safety

EXISTING CONDITION OF MUNI FACILITY

A survey for the presence of hazardous wastes in the MUNI building at 24th and Utah streets was conducted in 1989.[1] The survey included sampling and analysis for heavy metals, asbestos, pesticides and polychlorinated biphenyls (PCBs). Samples were collected of dust from floors, horizontal surface and beams and tested for 17 metals that could potentially be hazardous. Samples were also collected of materials suspected of containing asbestos, such as pipe insulation, wall and ceiling plaster, and ceiling and floor tiles, and were analyzed for the presence of asbestos.

The results of the survey indicated that dust samples contain concentrations of lead, zinc, copper and cadmium that are considered hazardous by the California Code of Regulations, Title 22. In addition, priority pollutants and pesticides were detected in the samples, though below levels considered hazardous. PCBs were also detected, again at concentrations below the hazardous waste limits. Asbestos was not detected in the dust samples, although asbestos-containing materials were found in the building; this included furnace and pipe insulation and floor tiles, which contained up to 40% asbestos. No metals were detected in a sample of the brick structural material, and no asbestos was detected in a sample of the interior roofing felt material.

The survey concluded that: dust is generally distributed throughout the building and is presently accumulating or being redistributed throughout the building; the dust present in the building can be classified as a hazardous waste due to the high concentrations of lead, zinc, copper and cadmium; the concentration of other metals in the dust are below the hazardous waste limits but may still exceed worker health and safety standards if airborne; organic contamination is generally not a problem at this site, although low levels of PCBs and pesticides were detected in the dust samples; asbestos is present in the building and should be removed prior to demolition; and there is a high probability that PCB-containing substances are present in the building.

It was recommended that: personnel conducting work that could disturb dust must be provided with appropriate personal protection equipment; before any demolition begins, the building should be cleaned to remove contamination; the general cleaning standard should be to remove all hazardous dust that could become airborne during the demolition process; during cleaning activities, the asbestos should be removed

[1] Clayton Environmental Consultants, Inc., 1989. *MUNI Survey 24th Street and Utah Street San Francisco, California*. Prepared for the San Francisco Department of Public Health, February 20, 1989.

first to avoid spreading asbestos fibers throughout the building; after the building has been cleaned, items containing or suspected of containing PCBs should be removed; standards and bid specifications should be developed for building clean-up activities; clean-up activities should be monitored to ensure that standards are being followed; and following clean-up activities, re-inspect with sampling, if necessary, to verify that cleaning is complete.

EXISTING SOILS AND GROUNDWATER CONDITIONS

At the existing MUNI facility on the project site, leaking underground storage tanks formerly containing gasoline or diesel fuel have resulted in contamination of soils and groundwater in the site vicinity. It is estimated that the tanks had been in use for at least 40 years, until 1986 when they were no longer used. In 1987, the nine underground storage tanks were removed from the ground beneath the west sidewalk of San Bruno Avenue on the southern half of the site. At the time of tank removal, petroleum products were detected in subsurface soils at the tank locations in concentrations up to 23,000 parts per million (ppm). The Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), is the lead agency for managing fuel leaks from underground storage tanks. The RWQCB requires soil remediation when total petroleum hydrocarbons exceed 1,000 ppm, and concentrations of total petroleum hydrocarbons greater than 1,000 ppm in soil are considered hazardous by the Department of Health Services (DOHS).

Hazardous waste investigations and remediation efforts at the site are required by the RWQCB, as outlined in their Leaking Underground Fuel Tank guidance document and the Guidelines for Investigation and Remediation of Leaking Underground Storage Tanks. The San Francisco Department of Public Health and the PUC are overseeing the remediation program and have hired Harding Lawson Associates to conduct leak investigations and site characterization studies.[2,3]

Leak investigations in 1989 indicated that petroleum hydrocarbons, measured as gasoline and diesel, were present in the soils and groundwater at the site in the vicinity of the former location of the tanks. Soil borings and installation of groundwater monitoring wells indicated that concentrations of total petroleum hydrocarbons in soils were as high as 19,600 ppm. Groundwater at the site was encountered at a depth of approximately 25 feet below the surface, and approximately 1 to 4 feet of free-floating petroleum product

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[2] Harding Lawson Associates, 1989. *Preliminary Petroleum Leak Investigation, MUNI Maintenance Facility, 24th and Utah Street Garage*. Prepared for City and County of San Francisco, Department of Public Works, March 9, 1989.

[3] Harding Lawson Associates, 1992. *Underground Storage Tank Site Characterization, MUNI Maintenance Facility, 24th and Utah Streets, San Francisco, California*. Prepared for City and County of San Francisco, Department of Public Health, June 23, 1992.

was observed in the groundwater. Benzene, toluene, and xylene -- all constituents of gasoline and all considered to be hazardous -- were detected in the groundwater.

Further investigations in 1990 included specialized test borings (called cone penetrometer test) to collect groundwater samples for chemical analysis and installation of additional groundwater monitoring wells beyond the perimeter of the previously installed wells. Petroleum hydrocarbons were measured in soils at concentrations up to 12,700 ppm. Floating product was observed on the groundwater table. Benzene, toluene and xylenes were detected in the groundwater in the downgradient direction from the tank locations.

In 1991, an aquifer pumping test was conducted at the site to determine the rate of movement of groundwater. In addition, petroleum product was pumped from four of the monitoring wells (referred to as "product recovery") between June and December 1991. At the end of this period, about 250 gallons of product were removed from the wells.

Site characterization continued in 1992 to assess the lateral extent of floating petroleum hydrocarbon product and groundwater affected with dissolved petroleum hydrocarbon. Altogether 14 monitoring wells have been installed in about a one-block radius from the former underground tank locations. Information from the installation and monitoring of these wells plus additional soil vapor extraction wells, cone penetrometer sampling and vacuum probe groundwater sampling have resulted in the characterization of the groundwater and the estimated extent of contamination. Groundwater table elevations were determined to range from 35.09 to 29.14 feet and vary approximately 1 foot seasonally. Groundwater was measured to flow north-northwest to south-southeast. The groundwater gradient[4] ranges from approximately 0.22 to 0.84 foot per 100 feet at the southern edge of the project site and southward toward 25th Street. Figure 18 indicates the estimated outermost area of groundwater affected with dissolved petroleum hydrocarbons, extending across the southern portion of the project site southward to 25th Street. The approximate area of floating petroleum hydrocarbons is confined within this larger area to the southeast corner of the site and the intersection area of 24th Street and San Bruno Avenue. Soil vapor extraction pilot testing also identified the presence of high concentrations of hydrocarbon vapor (up to 20,000 ppm) in the subsurface soil. The soil vapor extraction testing indicated that this technique is a feasible remediation method for some portions of the site and could contribute to reducing the floating hydrocarbon product in the former tank area.

In May 1992, Harding Lawson Associates completed design of a remediation system to achieve clean-up of subsurface gasoline and diesel present in soil and groundwater at the site. The first phase of remediation consisted of installation of piping and pumps in onsite wells to begin a product recovery program. Product

[4] Groundwater gradient is the direction and rate of movement or flow of subsurface waters.

recovery is currently being conducted at the site to extract petroleum product floating on the surface of the groundwater (also known as "free-product" or separate-phase hydrocarbons).

An expanded product recovery program and the next phase of site remediation is currently under study by the Department of Public Health and Harding Lawson Associates.[5] This includes the following: design and implement a soil-vapor extraction system; design and implement a total fluids extraction and treatment system; and design and implement *in situ* (in place) biological treatment system. The soil-vapor extraction system is a technique to remove subsurface gasoline and diesel in the unsaturated soil above the water table; hydrocarbon vapors are extracted from the soil which are then combusted using an internal combustion engine. The soil-vapor extraction system is expected to operate about 18 months. The total fluids system is a technique to remove as much of the separate phase hydrocarbons present on the water table as possible prior to implementing biological treatment; a pumping system will remove the separate-phase hydrocarbons and groundwater containing dissolved hydrocarbons and pump it to an oil/water separator so that usable hydrocarbon product is recovered and groundwater is discharged to the sewer system. The total fluids system is expected to operate about eight months. The *in situ* biological treatment system is the destruction of hydrocarbons using naturally occurring microorganisms and stimulating them by controlling their environment. The normal biochemical processes for these microorganisms can result in the degradation of hydrocarbons present in the soil or groundwater. Implementation of the *in situ* biological treatment system is anticipated to operate about three to five years.

The next phases of remediation are pending the acquisition of necessary funding.[6] However, because free product removal is currently in progress, the site is considered under remediation by the RWQCB and is not in violation of federal and state regulations. Generally, there is no fixed schedule for completing the remediation activities, but only assurance that remediation is progressing.[7]

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[5] Filippini, Mark, Harding Lawson Associates, 1992. 24th and Utah Street Summaries, September 15, 1992.

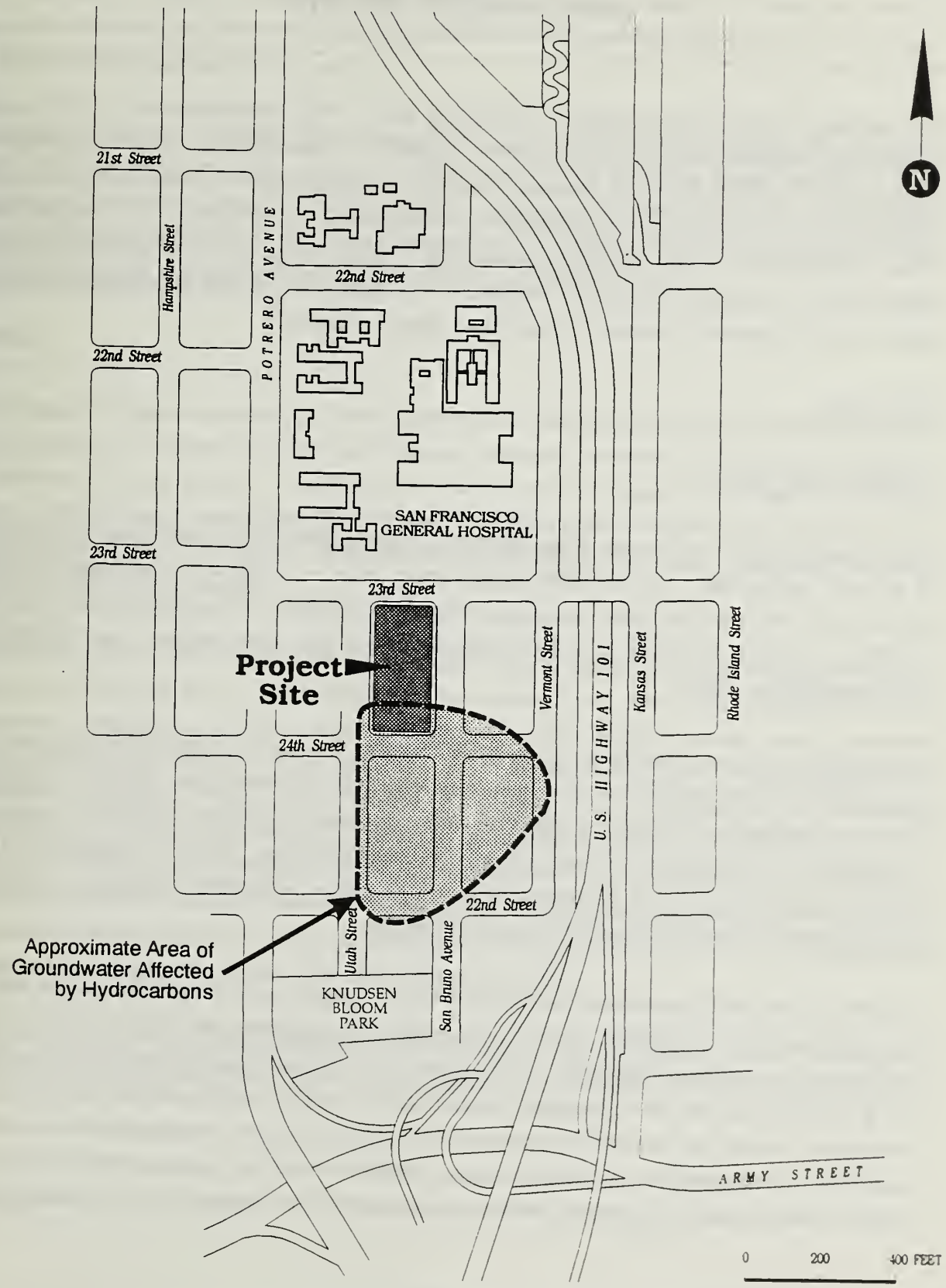
[6] Lee, William, San Francisco Department of Public Health, 1992. Meeting with Department of Public Health, MUNI, Parking Authority and Harding Lawson Associates regarding the status of the 24th and Utah Remediation Project on September 3, 1992 at 2548 24th Street, San Francisco.

[7] Hollis, Pam, San Francisco Department of Public Health, 1992. Telephone communication with Pam Hollis on October 15, 1992.

AREA OF GROUNDWATER CONTAMINATION

an Francisco General Hospital
arking Garage Project

FIGURE 18



rce : Harding Lawson Associates, 1992

CHAPTER 4
ENVIRONMENTAL IMPACTS

The Initial Study on the proposed project, published on July 17, 1992, determined that an EIR is required and identified the effects determined to be potentially significant. These effects are examined in further detail in this chapter. The Initial Study also identified some environmental effects which were determined to either be insignificant or mitigated to an insignificant level through measures incorporated into the project design. These topics, therefore, require no further environmental analysis (see Appendix A for further detail) and are listed as follows: Population; Utilities and Public Services; Vegetation and Wildlife; Geology and Topography; Water Quality; Historical Architecture; Cultural Resources; and Energy.

Land Use

EXISTING LAND USES

The proposed project would consist of demolition of an existing public facility service use and construction of a public parking use. The proposed project would result in conversion of the existing municipal maintenance facility use to a primarily hospital-serving public parking use. The parking structure would serve the SFGH employees and visitors as well as patrons of the 24th Street-Mission Street Neighborhood Commercial District (NCD).

The project's scale and character would be more similar to the scale and institutional character of the adjacent SFGH facilities than to the surrounding residential and commercial uses. Therefore, development of the proposed parking garage at the project site would appear as an extension of the SFGH campus south of 23rd Street, into an area not currently occupied by medical facilities. The only hospital-related facility located south of 23rd Street is the parking lot for the Gladstone Foundation Laboratory, located at the northwest corner of the 24th Street/Utah Street intersection.

Demolition of the MUNI maintenance facility would remove a public use of dissimilar mass and scale from the surrounding residential neighborhood. The proposed parking structure would also be of dissimilar mass and scale from the adjacent residences, and there would be no transition between the public or institutional use of the project site and the surrounding neighborhood. In general, building setbacks along 23rd Street, landscaping, and the brick/iron fencing along the SFGH campus boundary visually separate the institutional uses from the residential uses. While the proposed project's fencing and setbacks would help to provide a similar visual boundary, the proposed parking garage would tend to contrast with the land uses to the east,

south and west. However, it should be noted that such a contrast currently exists along the northern boundary of the site. Also, the existing use of the site as a MUNI maintenance facility contrasts with both the adjacent residential and hospital uses.

The proposed structure would alter traffic levels slightly in the immediate project vicinity with associated noise and air quality effects also occurring. Traffic, noise and air emissions would increase at some locations and decrease at others; the largest increases would occur on 24th Street (between the project access and Potrero Avenue) and Utah Street (between the future Phase 2 access and 24th Street). These effects are discussed in the Traffic, Noise and Air Quality sections of this EIR.

ZONING

The proposed parking use would be consistent with allowable uses under the current "P" zoning designation on the project site. No commercial uses are proposed as part of the project except for a small kiosk at the southwest corner of the site. A kiosk-type information center is proposed to be used as a center for posting neighborhood activities and transit routes, identifying local merchants and restaurants, and displaying local artwork and exhibits. The SFGH Institutional Master Plan (1987) designates the use of project site for a parking garage.

Under Phases 1 and 2, the proposed parking structure would not exceed 40 feet in height, as measured under the City Planning Code, and therefore would be consistent with current height restrictions for the project site. It should be noted that under the City Planning Code method of measurement, the height limitation applies to the finish floor of the roof, and some structures, such as guard rails and parapets, are not included. In addition, if the structure is located on a grade (such as the proposed site), conformance with the height restriction is determined by averaging the heights at certain points along the site; thus, may be some points along the structure that exceed the height limit but when averaged over the entire site, the building height would be in conformance. Although under Phase 2, the proposed stair tower at 24th and Utah streets would be about 60 feet high above street level, the garage would conform to the zoning height restrictions that apply to the site and adjacent residential properties.

Zoning on all properties to the west, south, and east also restricts building heights to 40 feet. The proposed structure would be below the 105-foot zoning height restriction for the adjacent SFGH facilities to the north.

CUMULATIVE IMPACTS

The existing parking lot for the Gladstone Foundation Laboratory, located at the northwest corner of the 24th Street/Utah Street intersection, as well as other adjacent parcels to the west are currently being considered for development of a 104,000-square-foot building for use by Gladstone for medical laboratories and support services and underground parking. This building would occupy the entire 24th Street frontage between Potrero Avenue and Utah Street. The Gladstone project, if approved, would require a re-zoning and designation as a special use district. It is anticipated that this development would be similar in scale to the proposed parking structure, and that both would contrast with the surrounding residential and commercial uses. When considered in conjunction with the Mental Health Skilled Nursing Facility currently under construction on the north side of the SFGH, the proposed parking structure and the Gladstone development could be perceived as extension of medical/institutional uses both north and south of existing SFGH structures.

Transportation, Circulation and Parking

The proposed SFGH parking garage is designed to accommodate a total of 1,200 parking spaces, with about 800 to 850 spaces proposed to be built during the first phase of construction. Initially, SFGH estimates approximately 60 to 65% of the spaces (520 of the 850 spaces) would be used for monthly staff parking. The remaining spaces would be available for transient use by patients, visitors, staff and the surrounding community. Assuming these same proportions would apply for a 1,200-space parking facility, about 750 parking spaces of a 1,200-space facility would be used for monthly staff parking, and the remaining 450 parking spaces would be evenly divided between daily staff parking and patient/visitor/other parking. For the purpose of this analysis, both an 800- or 850-space garage (Phase 1) and a 1,200-space garage (Phase 2) are evaluated for transportation impacts. For the Phase 1 analysis, the worst-case conditions are assumed for all cases; thus, with respect to potential parking and traffic impacts, the analysis is based on an 800-space garage, while the analysis for the site access impacts is based on an 850-space garage.

FACTORS AFFECTING TRAVEL MODE AND PARKING DEMAND

If the proposed garage is constructed, a number of factors in combination would affect the future parking demand at SFGH. The TSM program effectiveness, the parking rate structure of the garage, the presence of residential permit parking, and the size of the proposed garage all combine to affect the travel modes and the vehicle per employee ratio, which in turn affects the parking demand.

TSM Program Effectiveness

Based on previous traffic analysis conducted for SFGH,[1] the current Transportation Systems Management (TSM) program consists of incentives to encourage transit use and to reduce driving alone. Such incentives include sales of transit passes, shuttle services to other medical institutions, and promotion of ridesharing through matchlists. As noted previously in Table 1 (page 44), with the current TSM incentives at SFGH, about 59% of the employees drive alone, 10% rideshare, and 25% of the employees use transit. With these travel mode splits, the total existing ratio of vehicles per employee is 0.60 (including rideshare).

[1] Dowling Patterson Associates, 1990. *San Francisco General Hospital Mental Health Facility Parking & TSM Analysis*. February 1990.

Based on the City's TSM guidelines,[2] the current level of TSM effectiveness on the SFGH campus would be considered low.[3] A moderate or high level of TSM effectiveness would include not only incentives but "disincentives" or deterrents as well. An effective disincentive for the drive-alone mode would be to charge for parking. Depending on the parking rate, moderate reductions could be expected in the vehicles per employee ratio.

Parking Rate Structures

Surveys have been conducted at five other medical institutions within the City of San Francisco to determine specific parking rate structures currently used for employees and visitors.[4] The monthly charge for parking at the medical institutions ranges from $20.00 to $95.00 per month. Based on these rates, the average charge for monthly parking in the City is assumed to be about $55.00. It is noted that SFGH currently does not charge employees for parking on either a daily or monthly basis. Further analysis of the medical institutions reveals that Kaiser-Permanente, Mt. Zion, and St. Francis all have lower vehicle per employee ratios than St. Mary's and Davies. Both the latter institutions charge a very low monthly parking rate. There appears to be a strong correlation between the amount charged for monthly parking and the actual vehicle per employee ratio. A higher monthly fee generally results in a lower vehicle per employee ratio. To evaluate the effects of different parking rate structures, this analysis will consider monthly parking fees under $55.00 to be low and over $55.00 to be high.

Residential Permit Parking (RPP) Program

The Department of Parking and Traffic plans to establish a two-hour residential permit parking (RPP) program in the residential areas surrounding SFGH, and it is expected to be in effect when the Phase 1 of the proposed project is completed. This program would limit on-street parking for anyone without a permit to two hours, while residents of the area would be able to purchase permit stickers that allows them to park on-street for longer periods of time. In the vicinity of SFGH, however, there are approximately 250 on-street parking spaces immediately bordering the hospital campus that are not in residential areas and would not be included in the RPP program. These spaces would likely be available for hospital parking.

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[2] City and County of San Francisco, Department of City Planning, 1988. *Transportation Management Program in Greater Downtown*. January 1988.

[3] Dowling Patterson Associates, 1990.

[4] Dowling Patterson Associates, 1990.

Most medical institutions in the City are located in residential areas which have similar RPP programs. Studies have indicated that these RPP programs have been shown to be somewhat effective in reducing the drive-alone mode at medical institutions, although there are still some employees who would continue to park on-street regardless of the restrictions.[5]

PARKING IMPACTS

The methodology used to evaluate the effects of the different garage sizes with various levels of TSM and parking rate structures is based on the existing vehicle per employee ratio. This ratio represents the total number of drive-alone and carpool vehicles divided by the daytime employment at the medical institution. The current ratio at SFGH is 0.60. It is this ratio that may change (up or down) depending on the size of the garage and levels of TSM and parking rate structures. The criteria for changing the vehicle per employee ratio has been based on the SFGH Mental Health Facility Parking and TSM Analysis conducted by Dowling Patterson and Associates in 1990. Based on other medical institutions surveyed within the City, the most aggressive measures of TSM and parking rate structures have resulted in changes in the vehicle per employee ratio on the order of 0.10.

The Phase 1 development would consist of a parking garage and lot accommodating from 800 to 850 spaces. For this specific analysis on parking demand and traffic-related impacts, a size of 800 spaces has been used for a worst-case scenario. As with the proposed Phase 2, 1,200-space garage, it can be expected that some employees will continue to park on-street. This may depend on the parking rate structure or the simple convenience of parking on-street. Based on previous parking demand studies, it is projected that 100 to 200 on-street spaces around the hospital would be occupied by SFGH-related employees and/or visitors.

Phase 1: 800–Space Parking Garage

800–Space Garage With RPP, Low TSM, Low Parking Rates. Based on the calculated parking demand of 1,650 spaces for hospital employees and visitors and an existing on-site supply of 584 spaces, the actual existing on-street demand would be about 1,066 parking spaces (this includes the 156 illegally parked vehicles on-site, since technically, there are no on-site spaces available for these vehicles; so their demand has been diverted to on-street). With an RPP program in place, employees would theoretically not be able to park on-street. However, an 800-space garage with low TSM and low parking rates would likely

[5] Omni-Means, Ltd., 1992. Draft Transportation Analysis for the San Francisco Kaiser-Permanente Institutional Master Plan Update. May 1992.

encourage the drive-alone mode while effectively eliminating any gains in reduced vehicle per employee ratio from the RPP program. The proposed Phase 1 parking garage would be able to accommodate about 75% of the on-street demand. Based on these factors, the vehicle per employee ratio is projected to increase from 0.60 to 0.65. Assuming 2,390 employees at SFGH (see Table 3, page 47), an increase in the vehicle to employee ratio of 0.05 would result in an additional demand for 120 parking spaces, with a total demand increasing from 1,650 to 1,770 spaces. Subtracting out the existing on-site parking supply of 584 spaces, the total on-street demand would be 1,186 spaces. With the proposed 800-space garage, the ultimate net on-street demand would be 386 spaces.

800–Space Garage With RPP, High TSM, Low Parking Rates. Heavy emphasis by SFGH on TSM measures to reduce the drive-alone mode may result in a reduction in the vehicle per employee ratio from 0.60 to 0.55. However, there would still be an incentive to drive due to the availability of the garage, which would offset any reduction in vehicle per employee ratio. Based on this factor, the existing vehicle per employee ratio would remain unchanged at 0.60. The resulting parking demand would stay at 1,650 spaces. Subtracting out the existing on-site supply of 584 spaces, the total on-street demand would be 1,066 spaces. With the proposed 800-space garage, the ultimate net on-street demand would be 266 spaces. An aggressive TSM program (high TSM with high parking rates) combined with an RPP program would likely decrease the vehicle per employee ratio even greater.

800–Space Garage With RPP, Low TSM, High Parking Rates. The combination of an RPP program with high monthly parking rates under the existing TSM program could likely reduce the vehicle per employee ratio by 0.05. Again, the lack of an aggressive TSM program would offset any further gains in drive-alone reductions and the existing vehicle per employee ratio would remain unchanged at 0.60. The resulting parking demand would stay at 1,650 spaces. Subtracting out the existing on-site demand of 584 spaces, the total on-street demand would be 1,066 spaces. With the proposed 800-space garage, the ultimate net on-street demand would be 266 spaces. An aggressive TSM program (high TSM with high parking rates) combined with an RPP program would likely decrease the vehicle per employee ratio even greater.

800–Space Garage With RPP, High TSM, High Parking Rates. This combination of an 800-space garage with an RPP program, high TSM effectiveness, and high parking rates would likely be the most effective combination in reducing the drive-alone mode percentage at SFGH. Based on a 1991 study entitled *Factors Affecting TDM [Transportation Demand Management] Program Effectiveness At Six San Francisco Medical Institutions*, the single most important factor in reducing the drive-alone percentage was the cost of monthly

parking.[6] A comparison of institutional TSM programs has shown a high degree of correlation between the monthly parking rate and the degree of employee auto usage. This study establishes an actual equation, and states that ". . . the employee drive-alone mode split could be reduced by one percentage point for every $8.00 increase in monthly parking charges at these major medical institutions." It is projected that with all TSM incentives/disincentives and the RPP program, the vehicle per employee ratio could drop as much as 0.10. It is noted that none of the medical institutions (including Kaiser-Permanente and St. Marys) have achieved a vehicle per employee below 0.50 even with the most stringent TSM and parking rate structures. The resulting parking demand would be reduced by 240 spaces, from 1,650 to 1,410 spaces. Subtracting out the existing on-site supply of 584 spaces, the total on-street demand would be 826 spaces. With the proposed 800-space garage, the ultimate net on-street demand would be 26 spaces.

Phase 2: 1,200 Space Parking Garage

A 1,200-space parking garage would effectively provide enough spaces to absorb all of the SFGH-related on-street parking demand. However, previous parking demand studies have shown that even with an RPP program, some employees will continue to park on-street. This may depend on the parking rate structure or simple convenience of parking on-street. In either case, it is estimated that SFGH-related on-street parking demand would continue to occupy 100 to 200 spaces around the hospital vicinity for all analyzed scenarios.

1,200–Space Garage With RPP, Low TSM, Low Parking Rates. This combination would likely encourage employee auto use. The vehicle per employee ratio would likely increase by 0.10.

1,200–Space Garage With RPP, High TSM, Low Parking Rates. With the abundance of parking spaces, the vehicle per employee ratio would remain unchanged. Heavy emphasis on TSM would counter any increases in the drive-alone percentage.

1,200–Space Garage With RPP, Low TSM, High Parking Rates. This combination would leave the vehicle per employee ratio unchanged.

1,200–Space Garage With RPP, High TSM, High Parking Rates. With an aggressive combination of drive-alone disincentives, the vehicle per employee would likely decline by 0.05.

[6] Dowling, Feltham, and Wycko, 1991. *Factors Affecting TDM Program Effectiveness At Six San Francisco Medical Institutions.* TRB 70th Annual Meeting, January 13-17, 1991.

TRAFFIC IMPACTS

Methodology and Assumptions

The analysis used in this EIR for assessing project traffic impacts is based on a previous study by William Marconi, entitled *Traffic Study For San Francisco General Hospital Mental Health Facility and Parking Garages.*[7] The Marconi study divided the area around SFGH into five traffic-generating zones. The actual number of vehicle trips generated by proposed garages were determined by calculating a composite PM peak hour trip rate from vehicle driveway counts at the SFGH employee and visitor parking lots. Walking distance surveys were also conducted to determine which on-street parking spaces were assumed to be hospital-related. Vehicle-trip generation coming to and from each traffic zone was then determined. Under various levels of TSM effectiveness, vehicle trips were subtracted from the street network and on-street parking areas and re-distributed through the study area intersections to estimate traffic to and from the proposed garages.

Distribution of PM peak hour vehicle trips related to the proposed parking garage is based on employee and visitor trip origins from the SFGH Master Plan Update Transportation Study.[8] This study indicated that about 48% of the site's traffic would be to and from the north on Potrero Avenue. Another 42% of the project's traffic would be to and from the south and southwest via Potrero Avenue. The remaining 10% of the project vehicle trips would be to and from the east on 23rd Street.

Effects on Intersection LOS

Access to the proposed parking garage would be different under Phase 1 and Phase 2 of the project. During Phase 1, the proposed 850-space garage would have one main access point off 24th Street between Utah Street and San Bruno Avenue. During the AM peak hour, there would be three lanes inbound and one lane outbound. During the PM peak hour, the lanes would be reversed with one inbound and three outbound. The 24th Street access would be closed at night when the only access to the parking garage would be on 23rd Street. During Phase 2, the proposed 1,200-space garage would have the same access on 24th Street as well as an additional access on Utah Street between 23rd and 24th streets.

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[7] Marconi, William, 1989. *Traffic Study for San Francisco General Hospital Mental Health Facility and Parking Garages*. September 12, 1989.

[8] DKS Associates, 1987. *San Francisco General Hospital Medical Center Master Plan Update Transportation Study*. November 1987.

Table 4 presents the existing levels-of-service during the PM peak hour at key intersections in the project area, and Table 5 compares existing and future intersection level-of-service operation. As shown in Table 5, PM peak hour volumes generated by the proposed project have been added to existing traffic volumes. For each phase of construction (800-space garage and 1,200-space garage), there are four separate combinations of TSM and parking rate structures. These are as follows: low TSM, low parking rates; high TSM, low parking rates; low TSM, high parking rates; and high TSM, high parking rates. The different combinations of existing plus project trips are shown in Figures 5 through 10 in Appendix B.

With project traffic added to existing volumes, all study intersections would be functioning at LOS "D" or better during the PM peak hour, which was determined to be the worst-case scenario. Based on parking garage queuing calculations, increased traffic conditions were shown to occur during the morning peak period and the afternoon shift-change period (2:30 to 3:30 PM); however, both of these periods had less traffic than the PM peak hour. As shown in Table 5, the effect of the proposed parking garage would not necessarily be to increase traffic in the project study area. Rather, the proposed project in combination with TSM and RPP programs and the parking rate structure would tend to re-distribute and concentrate SFGH-related traffic around the actual parking garage site, although marginal changes in traffic would occur with changes in employee travel modes.

As stated previously, the current TSM program at SFGH would be considered low effectiveness. As of September 1, 1992, SFGH has added free satellite parking and shuttle services. Ninety parking spaces would be reserved at the UCSF lot on 17th and Folsom. The shuttle would average three trips per hour between 6 to 9 AM, 3:30 to 8 PM, 11:30 PM to 12:30 AM. The SFGH 24th/Mission BART station shuttle service is also in operation to and from the SFGH campus.

Project traffic would be concentrated at the intersections of 23rd and 24th streets at Potrero as well as at the four unsignalized intersections bordering the garage site. The 24th/Potrero intersection has been analyzed for potential vehicle queuing problems for the westbound 24th Street approach. Based on a worst-case scenario (1,200 spaces, low TSM and low parking rates), there would be about a 210-foot vehicle queue or about 9 to 10 car lengths backing up on 24th Street from Potrero Avenue. This should not interfere with traffic exiting the garage.

At the 23rd, 24th and 25th street intersections with Potrero Avenue, it would be advantageous to prohibit vehicle parking on the north sides of 23rd, 24th and 25th streets to allow for two outbound turn lanes (left and right). A maximum of six parking spaces would be removed (two on each street) to provide for the extra turn lane. This would not necessarily improve intersection LOS; however, it would improve vehicle circulation and queuing. Some motorists exiting the garage would likely divert from 24th Street and travel

TABLE 4

EXISTING INTERSECTION LEVEL-OF-SERVICE
PM PEAK HOUR (4:30-5:30 PM)

Intersection	Control	LOS[1]	V/C[1]
Potrero/21st[2]	Signalized	A	0.43
Potrero/22nd (west leg)	Signalized	A	0.56
Potrero/22nd (east leg)	Signalized	A	0.48
Potrero/23rd	Signalized	B	0.68
Potrero/24th	Signalized	A	0.60
Potrero/25th (west leg)[3]	Signalized	A	0.58
Potrero/25th (east leg)[3]	Signalized	B	0.63

Utah/23rd	Stop-sign	A	
San Bruno/23rd	Stop-sign	A	
Vermont/23rd	4-way-stop	A	
Kansas/23rd	Stop-sign	A	
Utah/24th	Stop-sign	A	
San Bruno/24th	Stop-sign	A	
Vermont/24th	Stop-sign	A	

[1] LOS stands for Level of Service, see Appendix C. V/C stands for volume/capacity ratio. Signalized volume/capacity ratios have been based on a critical volume capacity of 1,425 vehicles. Volume/capacity ratios cannot be calculated for an unsignalized intersection. See Appendix B, page A-26 for Level of Service definitions.

[2] The Potrero/21st Street intersection was calculated with 1992 volumes as a comparison with 1989 conditions. Even with traffic diversion, the intersection is functioning at LOS "A" (0.52). Field observations have shown that this intersection operates very efficiently, even with a 49 percent increase in through volumes (from 1989).

[3] Due to external factors (vehicle queuing to southbound 101 on-ramp) the Potrero/25 intersections are likely operating at LOS "C" or worse. This condition is expected to be temporary in nature, as Caltrans plans to partially re-open earthquake damaged portions of I-280 and U.S. 101 in January 1993.

Source: Omni-Means, Ltd., 1992.

TABLE 5

EXISTING AND FUTURE INTERSECTION LEVEL OF SERVICE OPERATION

Intersection	Level of Service - Volume-to-Capacity Ratios												
		Existing + Project						Future + Project					
		800-Space Garage			1200-Space Garage				800-Space Garage			1200-Space Garage	
	Existing	(1)	(2)	(3)	(1)	(2)	(3)	Future	(1)	(2)	(3)	(1)	(2)	(3)
(1) Potrero Ave./21st St.	A-.43	A-.43	A-.42	A-.42	A-.42	A-.42	A-.40	A-.45	A-.45	A-.44	A-.44	A-.44	A-.44	A-.42
(2) Potrero Ave./22nd St. (West)	A-.56	A-.59	A-.59	A-.59	A-.54	A-.54	A-.52	A-.49	B-.61	B-.61	B-.61	A-.56	A-.56	A-.54
(3) Potrero Ave./22nd St. (East)	A-.48	A-.48	A-.47	A-.47	A-.47	A-.47	A-.45	A-.51	A-.51	A-.50	A-.50	A-.50	A-.49	A-.47
(4) Potrero Ave./23rd St.	B-.68	B-.69	B-.62	B-.61	B-.68	B-.64	B-.62	C-.73	C-.79	C-.77	B-.69	D-.82	C-.79	B-.69
(5) Utah St./23rd St.	A	D	C	C	D	D	C	C	D	D	C	D	D	D
(6) San Bruno Ave./23rd St.	A	A	A	A	A	A	A	A	A	A	A	A	A	A
(7) Vermont St./23rd St.	A	A	A	A	A	A	A	A	A	A	A	A	A	A
(8) Kansas St./23rd St.	A	A	A	A	A	A	A	A	A	A	A	A	A	A
(9) Vermont St./24th St.	A	A	A	A	A	A	A	A	A	A	A	A	A	A
(10) San Bruno Ave./24th St.	A	A	A	A	A	A	A	A	A	A	A	A	A	A
(11) Utah St./24th St.	A	A	A	A	B	B	B	A	A	A	A	B	B	B
(12) Potrero Ave./24th St.	A-.60	B-.64	B-.64	B-.63	B-.67	B-.65	B-.61	B-.64	C-.74	C-.74	B-.68	C-.77	C-.75	B-.66
(13) Potrero Ave./25th St. (West)	A-.58	B-.61	B-.61	B-.60	B-.61	B-.61	B-.60	B-.61	B-.63	B-.62	B-.62	B-.64	B-.63	B-.63
(14) Potrero Ave./25th St. (East)	B-.63	B-.65	B-.65	B-.65	B-.66	B-.65	B-.64	B-.65	B-.67	B-.67	B-.66	B-.68	B-.65	B-.65

NOTES: Volume-to-capacity ratios only apply to signalized intersections.
Future: Existing + Cumulative (Year 1995)
(1) Residential parking program with low TSM and low parking rates assumed.
(2) Residential parking program with high TSM and low parking rates or low TSM and high parking rates assumed.
(3) Residential parking program with high TSM and high parking rates assumed.
West: West side of an intersection where the east and west legs are offset (operation of west leg with the north and south legs).
East: East side of an intersection where the east and west legs are offset (operation of east leg with the north and south legs).

to either 23rd or 25th street to access Potrero Avenue, as there are also signals at these locations that would reduce delays.

Changes in intersection LOS with the project under the four combinations of TSM programs and rate structures compared to the existing LOS are depicted in Figures 19 and 20.

Cumulative Traffic

Background cumulative traffic was estimated by using a one percent per year growth factor added to existing volumes (up to the year 1995) to account for general growth in the City and project vicinity.[9] Additionally, two specific cumulative projects were included in this analysis and are described below. Cumulative vehicle trips have been added to existing plus project volumes and are shown in Figures 11 through 16 in Appendix B.

SFGH Mental Health Skilled Nursing Facility. The proposed SFGH Mental Health Facility would generate 63 PM peak hour vehicle trips with a parking demand of 95 spaces.[10] This is based on a 185-bed, 90,000 square foot building situated on the north side of the SFGH campus.

Gladstone Foundation Medical Research Building. The proposed Gladstone Foundation Medical Research Building would be located just north of 24th Street and west of Utah Street. The research building would be about 104,000 square feet of medical laboratory and support services space and would provide underground parking for about 200 vehicles.[11] Employees of the Gladstone Foundation are already working in the project study area so there would be no increase in vehicle traffic due to this project. There is a potential that on-street parking demand would also be reduced with these 200 vehicles able to park in their own garage. However, vehicle traffic from this project would be focused at the off-street parking garage location. It is projected that the project would re-distribute approximately 134 PM peak hour trips mainly from areas west of Potrero Street and east of U.S. 101.

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[9] Wycko, William, 1992. Meeting with Bill Wycko, San Francisco City Planning Transportation staff, August 28, 1991.

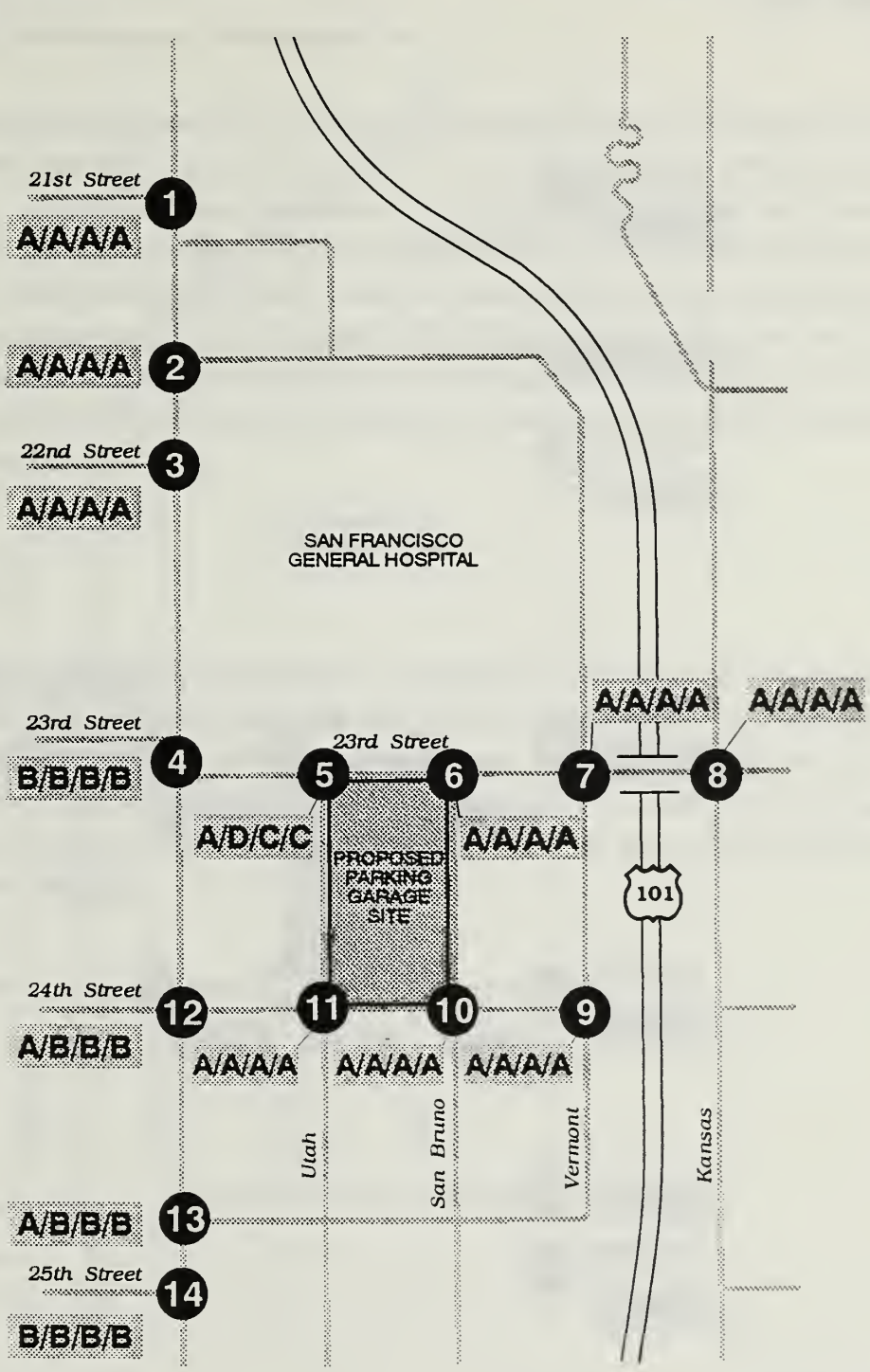
[10] Marconi, William, 1989.

[11] Department of City Planning, Case #89.232E: Gladstone Foundation.

LEVELS OF SERVICE WITH PROJECT
PHASE 1 : 800-SPACE GARAGE

FIGURE 19

San Francisco General Hospital
Parking Garage Project



LEGEND

A/A/A/A : Existing/
Existing + Project, RPP-Low TSM-Low Parking Rates/
Existing + Project, RPP-High TSM-Low Parking Rates or Low TSM-High Parking Rates/
Existing + Project, RPP-High TSM-High Parking Rates

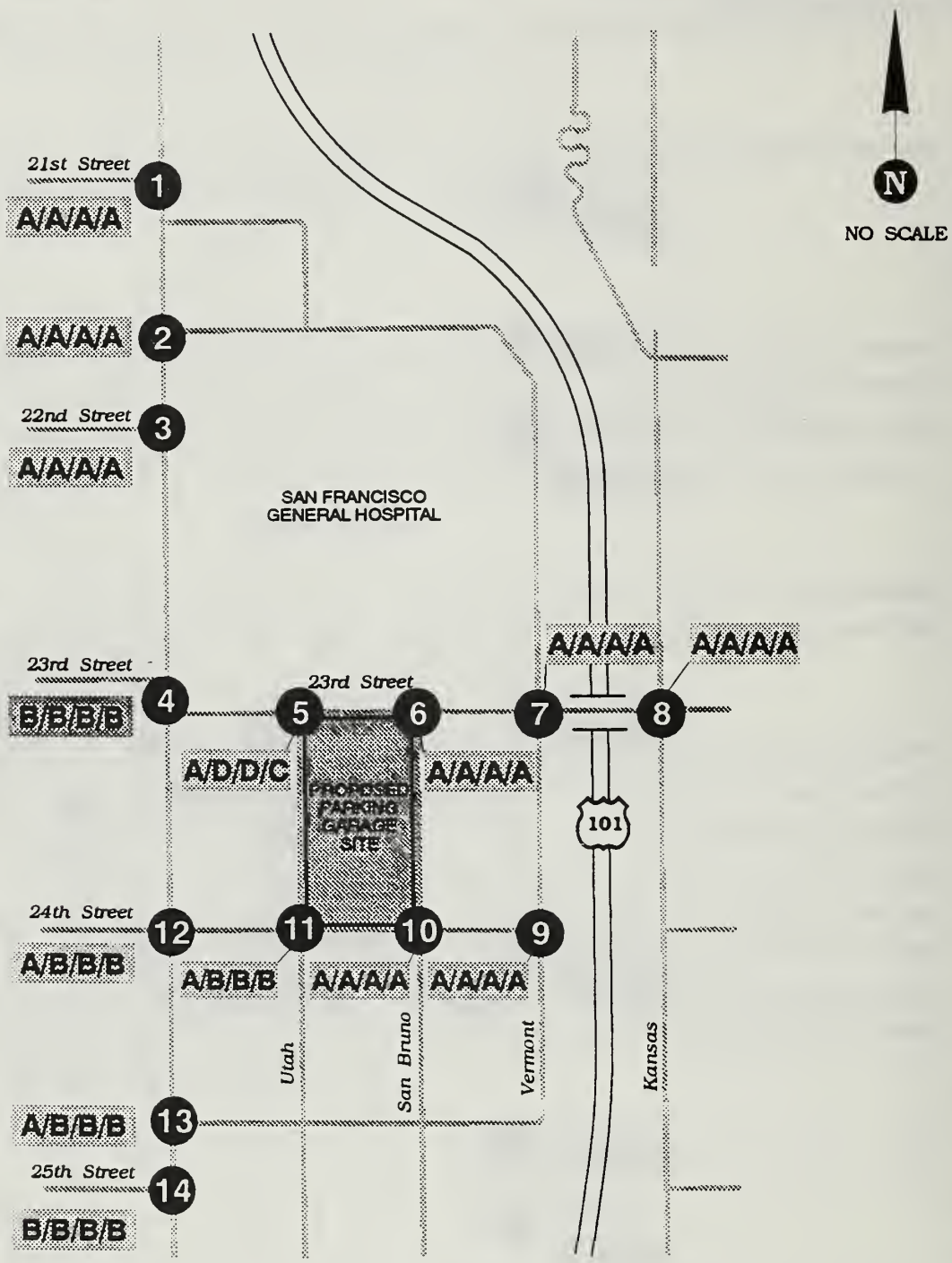
RPP : Residential Parking Program
TSM : Transportation System Management

Source : Omni-Means, 1992

LEVELS OF SERVICE WITH PROJECT
PHASE 2 : 1200-SPACE GARAGE

FIGURE 20

San Francisco General Hospital
Parking Garage Project



LEGEND

A/A/A/A : Existing/
Existing + Project, RPP-Low TSM-Low Parking Rates/
Existing + Project, RPP-High TSM-Low Parking Rates or Low TSM-High Parking Rates/
Existing + Project, RPP-High TSM-High Parking Rates

RPP : Residential Parking Program
TSM : Transportation System Management

Source : Omni-Means, 1992

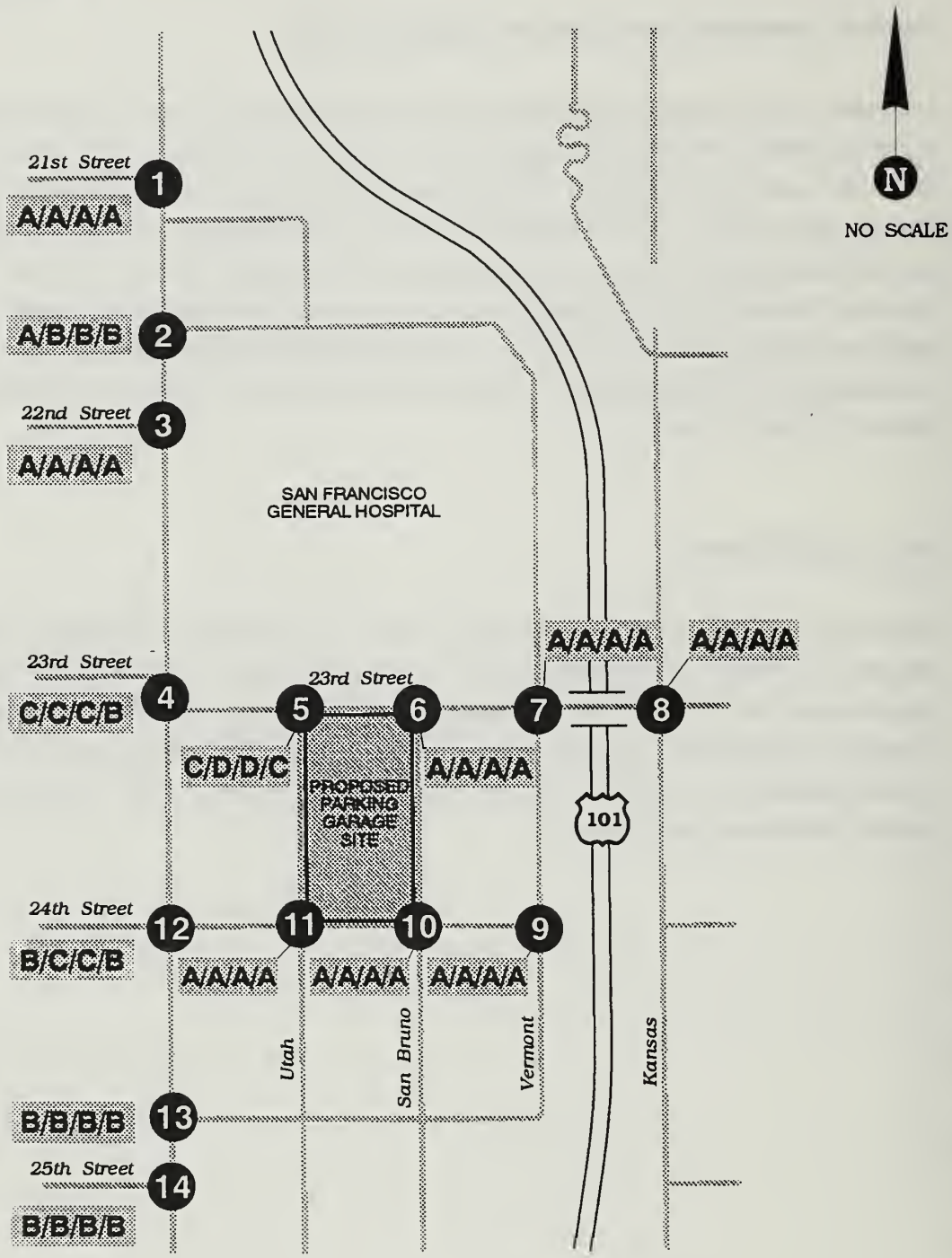
Effects of Cumulative Development on Intersection LOS

Calculations of future intersection operation with cumulative traffic volumes indicate that the levels of service would decrease at most locations but would still be at LOS "C" or better. As shown previously in Table 5 (page 78) under "Future + Project", only the intersections of Potrero/23rd Street and Utah/23rd Street would be operating at LOS "D". As with the proposed project, vehicle traffic in the SFGH vicinity would tend to be concentrated around the proposed garage location under cumulative traffic conditions. Assuming that the Gladstone Foundation parking garage would be located off 24th Street, vehicle traffic volumes would be further concentrated in this area. Changes in intersection LOS with cumulative development under the four combinations of TSM programs and rate structures compared to the future LOS without the project are shown in Figures 21 and 22.

SITE ACCESS IMPACTS

This section analyzes the traffic access and circulation characteristics associated with vehicle movement entering and exiting the proposed parking structure. The analysis is based on a 1,200- and 850-space structure and traffic flows during the AM and PM peak hours, which represents the worst-case conditions. It should be noted that the 23rd Street access would not be available during the AM or PM peak hours. It is also assumed that monthly employees would use card readers and all others (daily employees and visitors) would use ticket dispensers.

LEVELS OF SERVICE WITH CUMULATIVE DEVELOPMENT FIGURE 21
PHASE 1 : 800-SPACE GARAGE
San Francisco General Hospital
Parking Garage Project



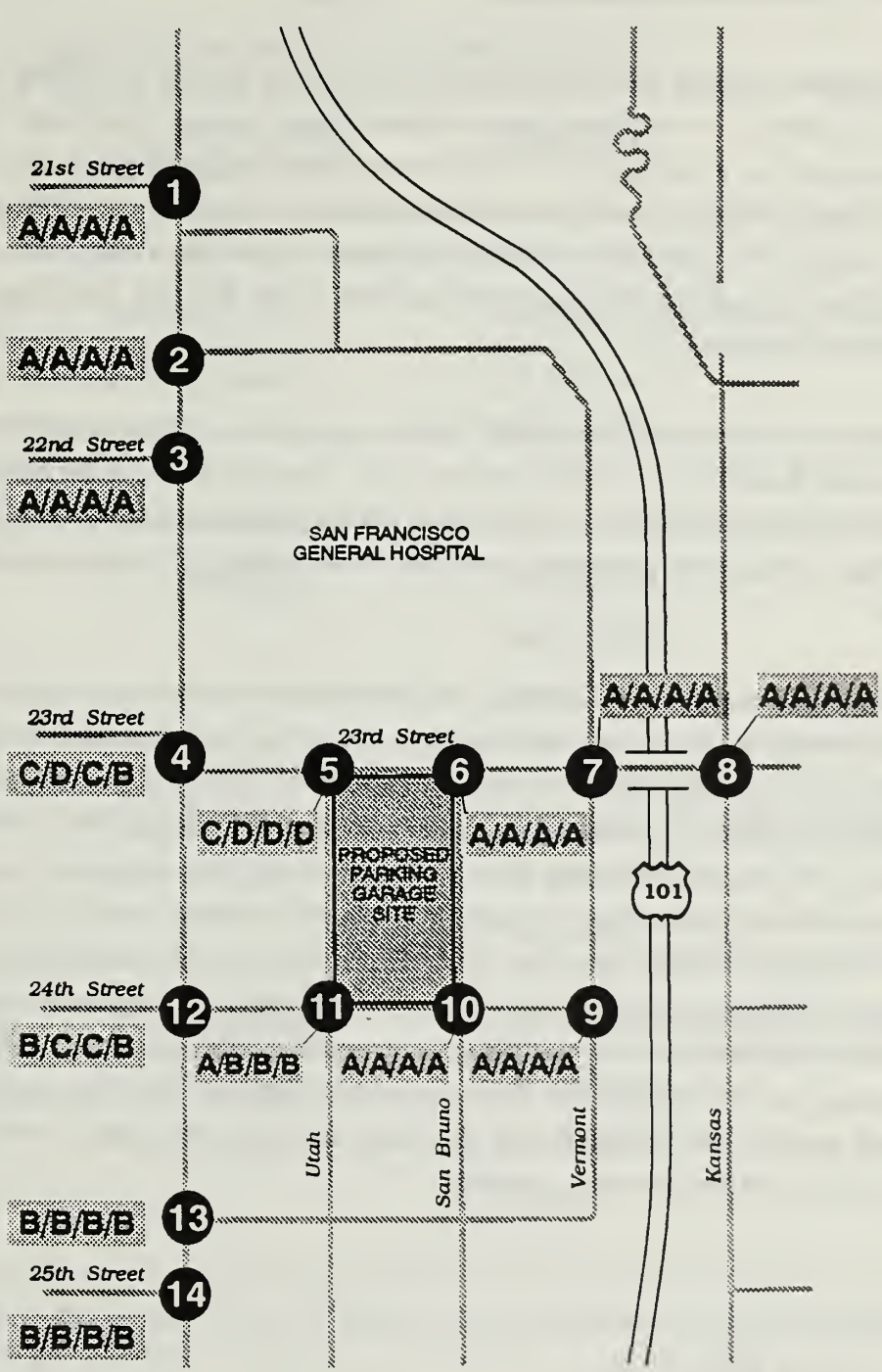
LEGEND

A/A/A/A : Future (1995)/
Future + Project, RPP-Low TSM-Low Parking Rates/
Future + Project, RPP-High TSM-Low Parking Rates or Low TSM-High Parking Rates/
Future + Project, RPP-High TSM-High Parking Rates

RPP : Residential Parking Program
TSM : Transportation System Management

Source : Omni-Means, 1992

LEVELS OF SERVICE WITH CUMULATIVE DEVELOPMENT FIGURE 22
PHASE 2 : 1200-SPACE GARAGE
San Francisco General Hospital
Parking Garage Project



LEGEND

A/A/A/A : Future (1995)/
Future + Project, RPP-Low TSM-Low Parking Rates/
Future + Project, RPP-High TSM-Low Parking Rates or Low TSM-High Parking Rates/
Future + Project, RPP-High TSM-High Parking Rates

RPP : Residential Parking Program
TSM : Transportation System Management

Source : Omni-Means, 1992

Phase 2: 1,200–Space Garage Access

Access Lanes. The AM and PM peak hour traffic volumes entering and exiting the parking structure are shown in Table 6. The volumes were calculated based on peak hour traffic counts at existing SFGH employee and visitor parking lots[12, 13] and methods described in the publication *Parking*.[14] As shown in Table 6, the 1,200-space parking structure is estimated to be used for about 975 employee spaces and 225 visitor spaces. This distribution of spaces is projected to generate a total of 683 AM peak hour trips (537 in and 146 out) and 809 PM peak hour trips (188 in and 621 out) using peak-hour utilization factors determined by Marconi.[15]

The peak hour factors (PHF), also listed in Table 6, represent a calculation factor which recognizes that more intense peak flows can occur within the peak hour. The traffic in/out of the parking structure would have the greatest potential impact on entrance and exit flow characteristics during the peak 15 minutes of the peak hour. These peak conditions were used in determining the entrance/exit design of the proposed garage.

The peak hour inbound/outbound flows were compared with traffic flow standards to determine the number of lanes needed for inbound and outbound flows. Table 7 presents the calculation of required lanes needed for peak hour inbound/outbound traffic. As shown in Table 7, a total of six access lanes would be appropriate to serve the 1,200-space garage. During the AM peak hour, the 24th street access could serve primarily employee trips with three inbound lanes (two with card readers and one with a ticket dispenser) and one outbound lane (with a card reader). A secondary access, located on Utah Street would have one inbound lane (with a ticket dispenser) and one outbound lane (with a cashier) and could serve the needs of visitors and daily employee parking. During the PM peak hour, the 24th Street access would have three outbound lanes (with one of these lanes serving monthly employees and two lanes serving visitors and daily employees) and one inbound lane serving monthly employees. The Utah Street access would have one inbound lane and one outbound lane for visitors and daily employees. Access lanes serving monthly employees would likely be card controlled.

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[12] Marconi, William, 1989.

[13] Omni-Means, Ltd., 1992. Traffic counts taken in July 1992.

[14] Weant, Robert A. and Levinson, Herbert S., 1990. *Parking*. ENO Foundation, 1990.

[15] Marconi, William, 1989.

TABLE 6

PEAK HOUR TRAFFIC FOR 1,200–SPACE GARAGE

No. of Parking Spaces	Peak Hour Trip Rate[1] (per space)	Vehicle-Trips
AM Peak Hour		
975 (employee spaces)	0.445 (inbound)	434 inbound (255 monthly, 179 daily)
225 (visitor spaces)	0.457 (inbound)	103 inbound
		537 inbound
975 (employee spaces)	0.046 (outbound)	45 outbound (26 monthly, 19 daily)
225 (visitor spaces)	0.451 (outbound)	101 outbound
		146 outbound
		683 Total
PM Peak Hour		
975 (employee spaces)	0.077 (inbound)	75 inbound (44 monthly, 31 daily)
225 (visitor spaces)	0.500 (inbound)	113 inbound
		188 inbound
975 (employee spaces)	0.445 (outbound)	434 outbound (255 monthly, 179 daily)
225 (visitor spaces)	0.830 (outbound)	187 outbound
		621 outbound
		809 Total

[1] Marconi, William, 1989. *Traffic Study for San Francisco General Hospital Mental Health Facility and Parking Garages*. September 12, 1989.

Source: Omni-Means, 1992

TABLE 7
CALCULATION OF REQUIRED LANES FOR PEAK HOUR
INBOUND/OUTBOUND TRAFFIC FOR 1,200–SPACE GARAGE

AM Peak Hour

179 inbound daily employee trips[1]	/	0.80 PHF[2]	/	300 vehicles per hour[3]	=	0.75 inbound lanes
255 inbound monthly employee trips	/	0.80 PHF	/	225 vehicles per hour	=	1.41 inbound lanes
103 inbound visitor trips	/	0.90 PHF	/	300 vehicles per hour[4]	=	0.38 inbound lanes
26 outbound monthly employee trips	/	0.80 PHF	/	350 vehicles per hour[3]	=	0.09 outbound lanes
19 outbound daily employees trips	/	0.80 PHF	/	150 vehicles per hour	=	0.16 outbound lanes
101 outbound visitor trips	/	0.90 PHF	/	150 vehicles per hour[5]	=	0.75 outbound lanes

Total AM peak hour lane requirements[6]:

2 inbound lanes with a coded card reader
2 inbound lanes with an automatic ticket dispenser
1 outbound lane with a coded card reader
1 outbound lane with a cashier

PM Peak Hour

31 inbound daily employee trips[1]	/	0.80 PHF[2]	/	300 vehicles per hour[3]	=	0.13 inbound lanes
44 inbound employee trips	/	0.80 PHF	/	225 vehicles per hour	=	0.24 inbound lanes
113 inbound visitor trips	/	0.90 PHF	/	300 vehicles per hour[4]	=	0.42 inbound lanes
255 outbound monthly employee trips	/	0.80 PHF	/	350 vehicles per hour[3]	=	0.91 outbound lanes
170 outbound daily employee trips	/	0.80 PHF	/	150 vehicles per hour	=	1.49 outbound lanes
187 outbound visitor trips	/	0.90 PHF	/	150 vehicles per hour[5]	=	1.39 outbound lanes

Total PM peak hour requirements:

1 inbound lane with a coded card reader
1 inbound lane with an automatic ticket dispenser
1 outbound lane with a coded card reader
3 outbound lanes with cashiers

1 Refer to Table 6 for calculation of peak hour traffic volumes.
2 Peak Hour Factor represents the peak 15 minutes within the peak hour. Peak Hour Factor (PHF) = 0.80 for employee trips and 0.90 for visitor trips.
3 Acceptable rate of movement per lane, assuming coded card reader with sharp turning movements for inbound vehicles and relatively straight outbound vehicle access. From Weant and Levinson, *Parking*.
4 Acceptable rate of movement per lane, assuming automatic ticket dispenser. From Weant and Levinson, *Parking*.
5 Acceptable rate of movement per lane, assuming cashier. From Weant and Levinson, *Parking*.
6 Lane requirements are determined by using the next higher whole number from the calculated value. From Weant and Levinson, *Parking*.

Source: Omni-Means, Ltd., 1992.

It is noted that with three outbound lanes during the PM peak hour, there may be vehicle conflicts with respect to turning onto 24th Street. This may especially be a problem if one motorist in the right lane wishes to turn left and one motorist in the left lane wished to turn right. To help alleviate this potential vehicle conflict, proper signage and lane designations would be necessary.

Vehicle Queues. The methodology for calculating vehicle queues is taken from *Parking.*[18] The AM peak hour inbound monthly employee flows would result in maximum queues (95% confidence level) of about two vehicles per inbound lane. During the PM peak hour, the maximum queues for employee exit lanes would be 4 vehicles. During this same period, the maximum outbound queues for visitor exit lanes would be 6 to 7 vehicles. These calculated queues would not result in measurable congestion problems on the adjacent streets (for inbound vehicles) or within the garage (for outbound vehicles).

Phase 1: 850-Space Parking Garage Access

For the Phase 1 scenario, the following calculations are based on an 850-space parking garage, which would represent the worst-case conditions for site access impacts.

Access Lanes. The lane requirements for inbound/outbound traffic flows for an 850-space garage would be based on the same methodology used for the 1,200-space garage used in Tables 6 and 7. Thus, the proportionately reduced lane requirements would be the following:

AM Peak Hour

0.94 inbound monthly employee lanes = 1 lane
0.75 inbound visitor and daily employee lanes = 1 lane
0.06 outbound monthly employee lanes = 1 lane
0.61 outbound visitor and daily employee lanes = 1 lane

PM Peak Hour

0.16 inbound monthly employee lanes = 1 lane (shared)
0.37 inbound visitor and daily employee lanes = 1 lane (shared)
0.61 outbound monthly employee lanes = 1 lane
1.92 outbound visitor and daily employee lanes = 2 lanes

These calculations suggest that during the AM peak hour, two inbound lanes (one with coded card reader for monthly employees and one with a ticket dispenser for visitors and daily employees) and two outbound lane (one for monthly employees and one combined for visitors and daily employees) would be satisfactory.

[18] Weant and Levinson, 1990.

During the PM peak hour, one inbound lane could serve the combined employee and visitor flows. For outbound flows, three lanes (one with coded card readers for monthly employees and two with a cashier for visitors and daily employees) would be adequate.

Vehicle Queues. During the AM peak hour, the inbound employee lane would have a maximum queue of four to five vehicles. The inbound visitor and daily employee lane would have a maximum queue of two to three vehicles. During this same AM peak hour, the outbound lane (with combined visitor and daily employee vehicles) would have a maximum queue of one to two vehicles, while the outbound lane for monthly employees would have a queue of not more than one vehicle.

The PM peak hour flows would operate with one to two vehicle queues in the monthly employee exit lane and six to seven vehicles in the visitor and daily employee exit lane. During this PM peak hour, the vehicle queues at the single inbound lane (for combined employees and visitors) would be one to two vehicles.

PEDESTRIAN CIRCULATION

Pedestrian access to and from the garage would be available at three access points. Two access points would off 23rd Street: from the second garage level, an access would be located near the 23rd Street/Utah Street intersection; and from the third garage level, an access would be located near the 23rd Street/San Bruno Avenue intersection. The third pedestrian access would be located off 24th Street just west of the main entrance.

Pedestrian traffic in the study area would increase with the proposed parking garage. Specifically, the intersections of 23rd Street/Utah Street and 23rd Street/San Bruno Avenue would exhibit increases in pedestrian volumes during the AM and PM peak hours. It is estimated that the average auto occupancy rate would be about 1.1 persons per vehicle, based on the percentages of drive-alone, carpool, and vanpool vehicles.[17] Under the Phase 2, 1,200-space garage as the worst-case scenario, there would be about 537 inbound vehicles and 146 outbound vehicles (see Table 10), which corresponds to about 591 inbound pedestrians and 161 outbound pedestrians or a total of about 752 pedestrians during the AM peak hour. Similarly, during the PM peak hour, the 188 inbound and 621 outbound vehicles would corresponds to 207 inbound and 684 outbound pedestrians or a total of 891 pedestrians.

It is assumed that about two thirds of the pedestrians would use the 23rd Street/Utah Street intersection and the other third would use the 23rd Street/San Bruno Avenue during the peak hours based on the location

[17] Omni-Means, Ltd., 1992.

of the garage relative to the main entrance drive to the hospital campus. Thus, the estimated increases in pedestrian traffic would be as follows:

	23rd Street/Utah Street	23rd Street/San Bruno Avenue
AM Peak Hour	502 pedestrians	250 pedestrians
PM Peak Hour	594 pedestrians	297 pedestrians

The estimated increases in pedestrian volumes would not be high enough to warrant signalization at either the Utah Street or San Bruno Avenue intersection with 23rd Street.[18] However, these intersections should be clearly marked for pedestrian crosswalks (north-south) as well as signage indicating a pedestrian crossing.

MUNI passengers riding the 48 Quintara/24th Street line would continue to be dropped off and picked up off 23rd Street between Utah Street and San Bruno Avenue. Although the buses would pull out of the traffic flow, with the re-distributed garage traffic, MUNI buses may experience increased delays in pulling back out into through traffic on 23rd Street.

CONSTRUCTION IMPACTS

During the 18-month construction period for the proposed garage, there would be a temporary increase in traffic associated with equipment and hauling trucks and with construction employees vehicles. It is estimated that the demolition would take about three months, during which time there would be the greatest number of hauling trucks for the removal of demolition debris. No estimates have been made regarding the amount of debris removal required or the associated number of trucks. The previous traffic study conducted by Marconi projected a total of 200 trucks a day for a 1,400 space garage. Using a proportional projection for the Phase 2, 1,200-space garage as a worst-case estimate, 172 trucks would be required during a six-hour work period. There would be about one truck movement every three to four minutes, which should not noticeably affect traffic conditions. In addition, there would be a maximum of 40 construction workers on site at any given time, with an associated maximum increase in 40 vehicles during the peak hour. This increase would not noticeably affect level of service at any of the project area intersections.

[18] Based on Caltrans, 1986, *Traffic Manual*, pedestrian warrants are as follows: The minimum pedestrian volume warrant is satisfied when for each of any eight hours of an average day, the following traffic volumes exist: (1) on the major street, 600 or more vehicles per hour enter the intersection, or (2) during the same eight hours there are 150 or more pedestrians per hour for all eight hours on the highest volume crosswalk crossing the major street.

Parking spaces immediately fronting the site would be temporarily lost during the construction period. This would total about 100 parking spaces. It is likely that most of these displaced motorists would park east of U.S. 101. During most phases of construction (except demolition, excavation and grading activities), construction employee vehicles would be able to park on the site in the staging area on the southern one-third portion of the site. During the demolition, excavation and grading, however, the construction employee vehicles would compete for parking spaces around the project site, and would most likely also park east of U.S. 101. Depending on the construction schedule for the proposed garage, there may be overlap with the construction of the Mental Health Skilled Nursing Facility, construction of which began in September 1992 and is anticipated to last about 18 to 22 months. This will result in a loss of an additional 220 parking spaces during construction, although about 100 of these spaces have been compensated for by re-striping the existing SFGH parking lots.[19] The net loss in parking during concurrent construction of the two projects would be about 220.

[19] Marconi, William, 1989.

Noise

CONSTRUCTION NOISE LEVELS

Demolition and construction activities would temporarily increase noise in the site vicinity. During project construction, there would be two primary sources of construction noise: (1) operation of construction equipment, and (2) truck traffic associated with hauling of demolition debris and excavated material. Two criteria are used to evaluate construction-related noise impacts: (1) potential maximum noise peaks generated by construction equipment and consistency of these noise peaks with the City Noise Regulation, and (2) construction-related noise peaks at residences located adjacent to construction areas and haul routes due to truck traffic increases.

Construction Equipment

During project construction, temporary noise increases would result from the operation of heavy equipment. Construction noise sources typically range from about 76 to 85 dBA for most types of construction equipment, with slightly higher levels of about 88 to 91 dBA for certain types of earthmoving and impact equipment. Noise levels from pile drivers can generate noise peaks of approximately 101 dBA at 50 feet, but pile drivers are not expected to be needed for this project. If noise controls are installed on construction equipment, the noise levels could be reduced by 1 to 16 dBA, depending on the type of equipment. The rate of attenuation is about three decibels (dB) for every doubling of distance from a point source. Noise levels at 50 and 100 feet from the noise source for several types of typical construction equipment and potential noise attenuation are shown in Table 8.

There are existing adjacent residents to the west, south and east as well as hospital facilities to the north. Adjacent residential uses across San Bruno Avenue and Utah Street are located as close as approximately 80 feet from the project boundaries. Residential and commercial uses to the south across 24th Street are located as close as approximately 65 feet from the project boundaries. The SFGH campus is located north of the project site, across 23rd Street. The two closest SFGH buildings to the project site are the Gladstone Administration Building, located approximately 100 feet from the project site, and the Main Hospital, located approximately 275 feet to the north. Since development would occur over the entire site, adjacent residential uses could be subject to noise peaks between those listed for 50 and 100 feet in Table 8, or approximately 1 to 2 dBA below those listed for 50 feet. The Gladstone Building would be exposed to noise levels similar to those listed for 100 feet in Table 8. The Main Hospital would be subject to noise levels approximately 4 to 5 dBA lower than those listed for 100 feet in Table 8.

TABLE 8

NOISE LEVELS AND ABATEMENT POTENTIAL OF CONSTRUCTION EQUIPMENT NOISE AT 50 AND 100 FEET
(in dBA)

Equipment	Noise Level at 50 Feet	With Feasible Noise Control[1]	Noise Level at 100 Feet	With Feasible Noise Control[1]
Earthmoving				
Front Loaders	79	75	76	72
Backhoes	85	75	82	72
Dozers	80	75	77	72
Tractors	80	75	77	72
Scrapers	88	80	85	77
Graders	85	75	82	72
Trucks	91	75	88	72
Pavers	89	80	86	77
Materials Handling				
Concrete Mixer	85	75	82	72
Concrete Pump	82	75	79	72
Crane	83	75	80	72
Derrick	88	75	85	72
Stationary				
Pumps	76	75	73	72
Generator	78	75	75	72
Compressors	81	75	78	72
Impact				
Jack Hammers	88	75	85	72
Pneumatic Tools	86	80	83	77
Other				
Saws	78	75	75	72
Vibrators	76	75	73	72

[1] Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost.

Source: Bolt, Beranek, and Newman, 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.*

Noise peaks generated by construction equipment could result in temporary disturbance (e.g., speech interference) to persons in adjacent buildings if the noise level in the interior of the building exceeds 45 dB.[1] A typical building can reduce noise levels by 25 dB with the windows closed,[2] although the actual noise attenuation may vary depending on building construction and design. This noise reduction could be maintained only on a temporary basis in some cases since it assumes windows must remain closed at all times. Assuming a 25-dB reduction with the windows closed, an exterior noise level of 70 dB at these residences would maintain an interior level of 45 dB. As shown in Table 8, even with the use of feasible noise controls, noise peaks generated by the operation of certain types of construction equipment would exceed this 70-dBA criteria, indicating that the interior noise environment at adjacent residences would be periodically affected during project construction. Construction-related noise peaks could result in interior noise levels periodically exceeding the 45-dBA criteria by approximately 2 to 7 dB.

During the daytime hours (7 AM to 8 PM), the maximum noise level permissible during construction is 80 dBA when measured at 100 feet from the noise-generating equipment. Impact tools, pavement breakers, and jackhammers are exempt from this requirement. Table 8 indicates that project-related construction equipment would be expected not to exceed the City's noise limit, assuming feasible noise controls are implemented.

Truck Traffic

Project construction would result in a temporary increase in truck traffic. Trucks would be needed to haul away demolition debris and excess excavated material. Residents located along haul routes would be subject to truck noise during the 18-month construction period, with most of the truck traffic occurring during the 4-month demolition and excavation phases. Although the haul route ultimately used would depend on the disposal location, it is anticipated that Potrero Avenue south to the Army Street/Highway 101 interchange would be used since it is the shortest route to the freeway. Between the site and Potrero Avenue, either 23rd Street or 24th Street could be used, since there are no truck restrictions on either street. After the demolition and excavation phases, truck traffic would be associated primarily with equipment and supply deliveries.

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[1]The highest noise level that permits relaxed conversation with 100 percent intelligibility throughout the room is 45 dB. People tend to raise their voices when the background noise exceeds 45-50 dB (U.S. Environmental Protection Agency, 1974. *Protected Noise Levels, Condensed Version of EPA Levels Document.* November. EPA 550/9-79-100).

[2]U.S. Environmental Protection Agency, 1974. *Protected Noise Levels, Condensed Version of EPA Levels Document.* November. EPA 550/9-79-100.

The noise from a single passing truck would range between 70 and 85 dBA at 100 feet depending on travel speed and truck size. Through mitigation measures included in the project (e.g., use of exhaust mufflers, intake silencers and engine enclosures), the higher levels could be reduced to about 75 to 78 dBA, respectively. Mitigated levels would be consistent with the City's noise limit (Article 29) of 80 dBA at 100 feet.

OPERATIONAL NOISE LEVELS

The proposed parking garage would result in a redistribution of existing traffic patterns. Hospital-related vehicles that currently park on streets surrounding the SFGH campus would be redistributed to streets surrounding the project site. This redistribution would concentrate incremental noise increases that occur on many streets in the general area to the few streets that serve the site; thereby resulting in greater incremental increases on streets serving the project than what currently occurs on the surrounding streets. This traffic redistribution would also result in decreases in traffic noise along some of the local streets.

Estimated project-related traffic noise increases on roadways surrounding the project site are shown in Appendix D. The calculations indicate that project-related noise increases would be 1 to 2 dBA along all surrounding and nearby roadways except the section of 24th Street between the project access and Potrero Avenue and the section of Utah Street between the future Phase 2 access and 24th Street. The section of 24th Street between Potrero Avenue and Utah Street would be subject to noise increases of approximately 3 to 4 dBA depending on the parking and transportation system management (TSM) scenario. The section of 24th Street between Utah Street and the project access would be subject to noise increases of 5 to 6 dBA. Under most of the analyzed parking and TSM scenarios, traffic volumes and the associated noise levels would decrease slightly (less than 2 decibels) along 23rd Street (east of Utah Street), 24th Street (east of the project access), Utah Street (south of 24th Street and between the future project access and 23rd Street), and San Bruno Avenue (south of 24th Street) due to the availability of parking at the proposed garage and location of the proposed access.

During the night, the only available project access would be on 23rd Street. Incremental noise increases on 24th Street and Utah Street would not occur during the nighttime hours when the 24th Street access would be closed. Noise increases on 23rd Street would occur during the nighttime hours when the 23rd Street access would be open. However, the magnitude of the increases would depend on the garage's level of use. It is anticipated that nighttime use of the project parking garage would be substantially less than its level of use during the daytime hours. Therefore, incremental noise increases on this section of 23rd Street would be lower than the estimated increases at the 24th Street access.

A 10-dBA increase in the level of a continuous noise represents a perceived doubling in the loudness of the sound. A 3-dBA increase is barely noticeable to most people while a 5-dBA increase is readily noticeable.[3] The most noticeable increases would occur between Potrero Avenue and the proposed and future project accesses on 24th Street and Utah Street. Affected land uses along Utah Street would include the proposed Gladstone medical research facility and some single-family residences. The number of affected residences would ultimately depend on where the future Phase 2 project access would be located. Along 24th Street, affected uses would include the ground floor neighborhood commercial uses and second floor residential uses.

The proposed parking garage would have an open design where no mechanical ventilation system would be required. While such a design would avoid potential noise impacts associated with the operation of ventilation equipment, it is possible that noise associated with vehicle operation could be audible beyond the project boundaries. In addition, the proposed parking facility would introduce new sources of noise at higher elevations on the site, possibly at the same elevation as the second or third floors of adjacent residences. The parking garage would generate short-term noise peaks associated with slamming car doors, engine start-ups, vehicles driving up and down ramps, squealing tires, and possibly car horns. These noise peaks can be amplified by the multiple interior noise reflections that occur within a parking structure due to the low, hard roofs and solid interior supporting walls. Noise measurements taken at a parking garage of similar design indicate that noise levels from these various sources are as follows:[4]

Noise Source	Maximum Noise Level (Lmax) at 15 Feet from Exterior Wall
Car Door Slamming	64-70 dBA
Engine Start-up	60-66 dBA
Car Passing	58-73 dBA
Tire Squeal	64-68 dBA
Car Horn	80 dBA

Twenty-four hour noise measurements taken at a similar parking garage indicate that noise levels at 65 feet from the parking structure were 59.6 dBA (Ldn), which is less than the ambient noise level of 63.8 dBA

[3]Bolt, Beranek and Newman, 1973. *Fundamentals and Abatement of Highway Traffic Noise.* Federal Highway Administration, Washington, D.C.

[4]Hans Giroux, 1991. Noise Impact Analysis for One Hutton Centre, Santa Ana, CA.

(Ldn) measured at residences along San Bruno Avenue (opposite the project site). In addition, noise levels due to the parking garage would be slightly lower since residences would be located farther (at least 90 feet away) from the garage than the 65-foot measurement distance. When these levels are considered together, the combined effect would be 65.3 dBA (Ldn), a 1.5-dBA increase. Such an increase would not be noticeable.

It should also be noted that project design features could help reduce the perceived effects of potential noise increases. While landscaping would not reduce noise levels, since about 50-feet width of vegetation is needed to obtain any reduction in noise level, sufficient landscaping to screen views of project vehicles would reduce the perceived noise impact on adjacent residents.

Air Quality

Parking garages are typically not associated with increases in air emissions because they usually do not generate traffic of themselves. Rather, they typically serve an already existing or planned future population. Parking garages, however, can offer people incentives to drive because of increased parking availability and thereby could result in increased traffic and could add to regional emissions. The actual traffic volumes (and distribution of travel mode) would depend on the various scenarios for high and low transportation system management (TSM) effectiveness and parking rate structures (see Transportation, Circulation and Parking section of this chapter). In addition, the changes in travel speeds associated with varying degrees of traffic congestion affect air pollutant emission rates, particularly reactive organic gases (ROG) and carbon monoxide (CO), which increase with decreasing speed.

CONSTRUCTION EMISSIONS

Project construction would generate short-term air emissions of dust from demolition and surface disturbance, from equipment exhaust from construction equipment and vehicles, and from off-site trucks hauling dirt, asphalt or building materials. These impacts would tend to be more of a nuisance, especially from dust soiling, rather than creating measurably unhealthful impacts. The extent of these emissions would vary depending on the type of activity and the ambient conditions.

Dust Emissions

Construction activity would temporarily raise dust levels in the project area. To estimate dust emissions, the California Air Resources Board uses a universal construction dust emission factor of about 110 pounds per acre per day of disturbance if no supplemental dust control measures are used.[1] Phase 1 of the project would require about 18 months of construction, with about four months of demolition and soil disturbance. Dust control levels of 75% are typically achieved with standard construction dust abatement practices for a parking structure because paving of the ground level of the parking facility would entail frequent compaction to achieve a suitable surface base for the foundation. Assuming standard dust control practices (such as regular watering of exposed surfaces and covering stockpiles and haul trucks) would be used at the 1.8-acre (80,000 square feet) project site, dust emissions of about 50 pounds per day are predicted during the first four months of construction. This 50 pounds per day of dust represents dust particles of 30 microns or less in diameter called total suspended particulates (TSP). Human breathing passages filter out most particulate matter greater than 10 microns in diameter. The 10-micron or less diameter fraction of TSP,

[1] California Air Resources Board, 1980. *Documentation of the 1977 Area Source Emissions Inventory.*

called PM-10, is about one third of the TSP in areas of "fresh" dust generation. Daily PM-10 emissions during construction would therefore be about 15 to 20 pounds. According to studies conducted by the BAAQMD, violations of PM-10 standards have occurred in San Francisco. The excavation associated with the new construction of the project could contribute temporarily to the emission of PM-10 in the City to a small degree. Such emission may lead to an increase in frequency of particulate standard violations. The project sponsor has agreed to implement a mitigation measure for the reduction of PM-10 during demolition, excavation and construction (see mitigation measure 1, page 121).

In addition to small dust particles that remain suspended in the air for extended periods, construction activities also generate large particles that readily settle after leaving the construction site. These large particles are chemically inert and are readily filtered out by human breathing passages. Thus, the dust emissions would generally comprise more of a dust nuisance rather than any adverse health impact.

With prevailing winds from west to east, any project-site dust emissions would generally be carried toward residences along the eastern project boundary on San Bruno Avenue. The potential for dust transport would be increased during occasional offshore winds from the northeast that would carry dust farther distances west from the project site. Dust emissions would normally not be carried north to the SFGH campus, although under infrequent winds from the south, some construction dust could be carried toward the hospital. This condition, though remote, would be of particular concern because of the possibility of soil-borne bacteria, molds or viruses blowing in the vicinity of hospital patients.

Combustion Emissions

Construction activities would also cause combustion pollutants to be released from heavy-duty, on-site equipment and from off-site trucks hauling dirt, cement or other building or demolition materials. The California Air Resources Board estimates that typical parking garage construction in California requires the expenditure of about 200,000 horsepower-hours of on- and off-site construction equipment operations per acre for a parking facility.[2] Assuming that all on-site equipment and heavy trucks would be diesel-powered, the following emissions are calculated for daily project construction activities:

Reactive Hydrocarbons	1.7 pounds
Carbon Monoxide	6.2 pounds
Nitrogen Oxides	18.1 pounds
Total Particulates	1.4 pounds
Sulfur Dioxide	0.4 pounds

[2] California Air Resources Board, 1980.

The mobile nature of these sources, especially the on-road trucks, would tend to disperse these emissions widely in space and time. While the cumulative emissions would be somewhat more substantial over the 18-month construction period, the hourly or daily emissions would not be expected to result in violations of air quality standards. The existing baseline levels of primary construction equipment emissions, such as CO and NOx, are below ambient air quality standards the project area, and the local air basin could accommodate the additional temporary project emissions with no measurable degradation in area air quality.

Construction activities could also result in indirect, off-site effects if construction activity were to impede off-site traffic through detours, lane closures, large parked vehicles in or near off-site travel lanes, etc. Indirect effects could also include dirt or debris spillage from haul trucks, potentially causing nuisance conditions on roadways along the haul routes.

VEHICULAR EMISSIONS

Regional Emissions

Mobile source pollution changes on an areawide basis would result from changes in travel volumes on local streets around the project vicinity, as well as from new travel into the parking facility proper. On a regional scale, the proposed parking facilities could encourage more auto use by offering easy access and increased parking capacity in conjunction with low TSM and low parking rates. This would be associated with a mode shift toward greater auto use and an increase in the vehicle per employee ratio, resulting in an increase the vehicle-miles-traveled (VMT). Alternately, the project could create an air quality benefit if the parking management encourages reduction of VMT through carpool incentives and a combination of high TSM and high parking rate structures. The scenario with high TSM and high parking rates would generate fewer cars on the roadway system and would also result in reduced congestion, with substantially reduced ROG and CO emissions per mile of travel compared to the low TSM, low parking rate scenario.

To estimate the regional emissions it was assumed, as a worst-case, that the vehicle per employee ratio would increase a maximum of 10%, as previously discussed in the Transportation section of this chapter. Based on a parking demand of 1650, this would imply 165 "new" vehicles (or average daily traffic) over the existing volume of traffic would be attracted by the parking availability of a 1,200 space garage, low TSM and low parking rates. Regional vehicular emissions from the additional site-related traffic were calculated assuming that all trips are employee-related "cold start" travel between home and work. The California Air Resources Board URBEMIS3 (URBan EMISsions) model was used to calculate the regional vehicular emissions from the assumed worst-case traffic increase, based on average daily traffic of 165 vehicles for

the year 1995, with average speed of 30 miles per hour and 100% cold starts. The URBEMIS3 model incorporates the EMFAC7D factors in calculating emissions, while accounting for hot and cold starts, a breakdown of vehicle miles for a range of uses, and mix of vehicle types which would be predominantly light duty autos (see Appendix C, page A-49 for additional details). The estimated daily emissions for transporation-related sources are shown in Table 9.

The project emissions contribution to the total San Francisco transportation-related emissions (which is typically measured in tons per day for all pollutants) would be well below the one percent threshold established by the BAAQMD defining a potentially significant impact on air quality.[3] In addition, the BAAQMD has calculated the number of vehicle trips that create enough emissions for a potentially significant air quality impact to be 2,000 trips per day, or for a parking uses, 250 spaces. Therefore, the estimated worst-case of 165 new trips associated with the project would not meet the BAAQMD criteria.

TABLE 9

ESTIMATED DAILY TRANSPORTATION-RELATED AIR POLLUTANT EMISSIONS
(pounds per day)

Pollutant	Project, 1995[1]	SF County, 1995[2]
Reactive Hydrocarbons	4.9	26,500
Carbon Monoxide	62.9	272,000
Nitrogen Oxides	5.2	36,000
Total Particulates	negligible (<0.1)	70,000
Sulfur Dioxide	0.6	12,000

[1] Based on URBEMIS3 model using EMFAC7D emission factors, see Appendix C for assumptions. Reactive hydrocarbons are assumed to be about 92% of total hydrocarbons.
[2] Derived from BAAQMD, Air Quality and Urban Development, Guidelines for Assessing Impacts of Projects and Plans (1985), using 1982 baseline and data from Tables VI-A-1 and VI-A-2.

Source: Orion Environmental Associates, 1992.

[3] Bay Area Air Quality Management District, 1985. *Air Quality and Urban Development, Guidelines for Assessing Impacts of Projects and Plans.*

It is possible that the proposed parking garage would reduce local driving of hospital staff, patients and visitors circling the neighborhood searching for limited on-street parking, and thereby reduce regional air quality emissions. This assumption would be valid only if there is no change in the total volume of vehicles driving to and from the hospital and the associated parking demand. However, as discussed above, the traffic volume and parking demand (and associated air emissions) would depend on the TSM and parking rate strategies implemented.

In order to result in a regional air quality improvement, the proposed project would need to include strategies to offset the attractiveness of increased parking availability and to reduce the vehicle to employee ratio. The appropriate balance of TSM effectiveness and parking rate structure could lead to a reduction in VMT and reduced congestion, which again, as described in the Transportation section of this chapter, could decrease the vehicle per employee ratio by a maximum of 10%. As a best-case assumption, this reduction in VMT would be associated with a reduction in regional emissions equivalent to the worst-case assumption described above, and could offset some of the long-term emissions increases associated with cumulative growth in the region, albeit to a minimal degree.

Localized Emissions at Adjacent Intersections

Locally, the proposed parking garage would redistribute vehicles in the SFGH vicinity roadway system. These vehicles would slightly raise the Levels of Service (LOS) at the intersection of Utah and 23rd streets, but traffic flow would remain at an acceptable level. Unacceptable LOS usually indicates traffic congestion and increased emissions from slow moving cars. In this case, however, the traffic study indicates little change in overall traffic flow due to project implementation, and therefore, would exhibit little effect on local air quality.

To evaluate the potential for any measurable change in microscale air quality due to the proposed project, levels of carbon monoxide (CO) emissions were estimated at the four intersections adjacent to the project site for traffic conditions under the following scenarios: existing, with project, and cumulative conditions. Carbon monoxide was used to determine if there is any microscale impacts or "hot spot" potential.[4]

Calculation of localized CO exposure at 25 feet from the edge of local area streets were made for an hourly exposure analyzing six combinations of TSM effectiveness, parking rate structures and garage size as

[4] Although vehicles generate other pollutants besides CO, such as reactive organic gases and nitrogen oxides, these other air contaminants generally must undergo chemical reactions before causing adverse health effects. Carbon monoxide is considered a primary pollutant, since it would have its greatest health impact immediately adjacent to the source.

determinants of structure utilization. The local hourly contribution was added to the observed background CO level from the nearby Potrero Hill BAAQMD station to obtain a total exposure. Future background CO levels were estimated using a modified linear rollback (MLR) model to project 1995 baseline levels based on 1990 observations. Because there is a greater likelihood that the 8-hour CO level would be exceeded than the hourly level if project implementation were to create any hot spots, predicted hourly CO levels (without a background contribution) were scaled to an 8-hour exposure using a persistence factor of 0.7, and an 8-hour background was then added to the scaled value. Background levels for existing traffic determined from the BAAQMD data were 8.0 parts per million (ppm) for one-hour and 5.6 ppm for 8 hours. The 1995 background, based on an MLR assumption of a 4% reduction in regional CO emissions by 1995, were 7.7 for one hour and 5.4 ppm for the 8-hour impact calculation. Results for the hourly CO impact and the 8-hour CO exposures are shown in Tables 10 and 11, respectively.

The hourly or 8-hour CO exposure with project implementation would be equal to or less than exposure under existing conditions along San Bruno Avenue. With more cars turning into the structure rather than continuing eastward along 23rd or 24th streets, "with project" CO levels at the San Bruno intersections with these streets are actually slightly lower than for existing conditions. On Utah Street, the project impact would depend somewhat on the size of the structure and the balance of TSM and parking rate. The greatest increase in hourly or 8-hour CO levels would occur along Utah Street at 23rd Street if the 1,200-space parking garage is constructed and low TSM and low parking rates strategies are implemented; at worst, the localized increase due to increased site access traffic would be less than 2 ppm above the no-project condition. The existing-plus-project hourly CO contribution would be less than 3 ppm above the non-local background, while the existing-plus-project 8-hour CO contribution would be less than 2 ppm above the non-local background. These increases are small compared to the California hourly CO standard of 20 ppm or 8-hour standard of 9 ppm. Thus, the combination of CO levels from the proposed project plus background would not threaten continued attainment of the CO standard in the SFGH vicinity for even the worst-case traffic scenario. CO levels would be even less if higher TSM and higher parking rates were implemented.

TABLE 10

HOURLY CARBON MONOXIDE MICROSCALE CONCENTRATIONS
(parts per million or ppm)[1]

Project Scenario	Utah/23rd	Utah/24th	San Bruno/23rd	San Bruno/24th
Existing[2]	9.0	8.4	8.8	8.3
Existing + Project[2]				
850-space garage, LL[3]	10.6	8.9	8.6	8.3
850-space garage, HL/LH	9.9	8.9	8.6	8.2
850-space garage, HH	9.9	8.8	8.6	8.2
1200-space garage, LL	10.7	9.4	8.6	8.3
1200-space garage, HL/LH	10.5	9.2	8.7	8.3
1200-space garage, HH	10.0	9.2	8.6	8.2
Cumulative + Project[4]				
850-space garage, LL[3]	10.1	8.5	8.3	7.9
850-space garage, HL/LH	10.0	8.5	8.2	7.9
850-space garage, HH	9.5	8.4	8.2	7.9
1200-space garage, LL	10.2	8.9	8.3	8.0
1200-space garage, HL/LH	10.0	8.8	8.3	8.0
1200-space garage, HH	10.0	8.8	8.2	7.9

State Standard for 1-hour CO = 20 ppm
Federal Standard for 1-hour CO = 35 ppm

[1] Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Mission Bay Project EIR.
[2] Includes 8.0 ppm existing 1-hour background CO concentration.
[3] LL = Low TSM and Low parking rates, with residential parking program
HL/LH = High TSM and Low parking rates or Low TSM and High parking rates, with residential parking program
HH = High TSM and High parking rates, with residential parking program.
[4] Includes 7.7 ppm future 1-hour background CO concentration.

Source: Orion Environmental Associates, 1992.

TABLE 11

8–HOUR CARBON MONOXIDE MICROSCALE CONCENTRATIONS
(parts per million or ppm)[1]

Project Scenario	Utah/23rd	Utah/24th	San Bruno/23rd	San Bruno/24th
Existing[2]	6.3	5.9	6.2	5.8
Existing + Project[2]				
850-space garage, LL[3]	7.4	6.2	6.0	5.8
850-space garage, HL/LH	6.9	6.2	6.0	5.7
850-space garage, HH	6.9	6.2	6.0	5.7
1200-space garage, LL	7.5	6.6	6.0	5.8
1200-space garage, HL/LH	7.4	6.4	6.1	5.8
1200-space garage, HH	7.0	6.4	6.0	5.7
Cumulative + Project[4]				
850-space garage, LL[3]	7.1	6.0	5.8	5.5
850-space garage, HL/LH	7.0	6.0	5.8	5.5
850-space garage, HH	6.7	5.9	5.8	5.5
1200-space garage, LL	7.2	6.2	5.8	5.6
1200-space garage, HL/LH	7.0	6.2	5.8	5.6
1200-space garage, HH	7.0	6.2	5.8	5.5

State and Federal Standard for 8–hour CO = 9 ppm

[1] Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Mission Bay Project EIR.
[2] Includes 5.6 ppm existing 8-hour background CO concentration.
[3] LL = Low TSM and Low parking rates, with residential parking program
HL/LH = High TSM and Low parking rates or Low TSM and High parking rates, with residential parking program
HH = High TSM and High parking rates, with residential parking program.
[4] Includes 5.4 ppm future 8-hour background CO concentration.

Source: Orion Environmental Associates, 1992.

Localized Emissions at the Parking Garage

While local roadway CO impacts would be minimal, the proposed parking garage would result in a large number of vehicles that would be "cold-started" and running in pollution-inefficient modes during the PM peak hour. This may create a localized emissions increases in the immediate vicinity of the structure itself. Ambient air is considered to be air which is breathed involuntarily by the public at large. The air inside the parking structure would not be considered as ambient air under this definition, and ambient air quality standards, therefore would not apply. When that air moves outside beyond the structure's walls, then it would be considered as "ambient" air and the air standards shown in Appendix C would apply. Within the structure, the federal workplace (OSHA) standards would apply to any attendants or other employees stationed at the parking structure. The OSHA standard is 50 ppm of CO for an 8-hour period, since CO is the primary exhaust pollutant that can affect a sensitive receptor directly without requiring exposure to atmospheric conditions and undergoing chemical reactions to become toxic. The OSHA standard is about 5 times less stringent than the ambient CO standard.

A calculation of CO concentrations within the structure was made assuming that 50% of the parked vehicles within a filled garage would turn over in one hour and that the average travel speed would be 5 miles per hour inside the structure. If the air pollution is uniformly mixed within a "box" of air comprising the parking garage, the resulting hourly CO level for a 1995 vehicle fleet would be about 70 ppm divided by the hourly ventilation rate. If the rate of air exchange is two complete volumes of air in one hour, the interior hourly CO level would be 35 ppm. For partially open structures in San Francisco with typical wind conditions, the air exchange rate is generally much higher than twice per hour. Thus, the hourly CO level within the garage would likely be less than 35 ppm and would not exceed the 8-hour OSHA standard. Exposures within the structure over an 8-hour period would likely be below the worker health concern level.

The CO generated within the parking structure could be an emission source which could possibly affect pedestrians outside the structure. The CALINE4 roadway model was used to predict CO levels on the sidewalk at the nearest point of public access and assumed that the structure was a short segment of a linear source of air pollution such as a freeway. The predicted ambient hourly CO exposure at the sidewalk nearest public access is 5.6 ppm above background. This level can be added to a peak background of 8 ppm for a total hourly CO concentration of 13.6 ppm, which would be less than the California hourly standard of 20 ppm. Additional dispersion of CO would occur with distance, such that predicted CO levels from vehicular exhaust emissions from the garage at the nearest adjacent homes or at the hospital would be even lower.

Visual Quality and Urban Design

ARCHITECTURAL DESIGN FEATURES

Massing and Scale

The Phase 1 parking structure would be approximately 185 feet by 270 feet in area. When Phase 2 is completed, the structure would measure about 185 feet by 400 feet, covering the entire block. This contrasts with the scale and massing of surrounding residential/commercial buildings and is more aligned with the scale of facilities on the SFGH campus.

The architectural treatment of the parking structure facades could help to moderate its apparent size. As shown on Figures 6 and 7 (Building Elevations), pages 22 and 23, the proposed exterior detailing would provide a textured, and articulated surface which would help to reduce the massing of the structure. The facade of the parking structure would be constructed of cast concrete, with parapet walls, guard rails, and window-like structures. These features, combined with the pattern of light concrete and dark shadows from the interior of the open garage, would provide articulation of the building's exterior surfaces and help to reduce its apparent mass along the Utah Street and San Bruno Avenue facades. In addition, these facades would be made up of 28-foot modular sections which would appear as structural bays and would reflect the 25-foot residential lot-width of the neighborhood. The variations in the facade treatment would help to reduce the horizontal proportions of the structure.

The most prominent architectural features of the proposed design are the towers which would be located at the building corners. The cylindrical towers, about 32 feet in diameter, would enclose stairways and elevator shafts and would be sheathed in a curved metal framework. The first phase of construction would include towers at the northeast and northwest corners of the site, and would rise about 45 feet above street level.[1] During the second phase of construction, assuming the same architectural design, the towers at the southern end of the site along 24th Street would rise about 60 feet above street level. This would contrast with the approximately 30-foot high structures on the south side of 24th Street.

[1] Even though the towers would be over 40 feet in height, the structure would still be in compliance with the 40-foot height limitation as measured under the City Planning Code, since there are exceptions to the height limit for stair towers.

Although the colors have not yet been selected for the parking structure, they would be consistent with the existing neighborhood color scheme. This would also reduce the apparent mass of the structure and would tend to allow the structure to blend more readily with the neighborhood.

The parking structure would be set back about 11 to 13 feet from the street, providing a "light well" between the sidewalk and the structure and creating a more open and spacious pedestrian environment than currently exists. This open space would provide daylight and air circulation to the subsurface levels of the parking structure as well as space for landscaping and space for shadows cast by the garage to fall closer into the site.

Two photomontages, showing a computer model of the proposed parking structure composited with photographs of the site, were prepared for the proposed project. The photomontages are based on preliminary design of the proposed project at build-out of the 1,200-space structure, and assumes that the Phase 2 design intent would be the same as that used in Phase 1. When coupled with base photographs of the site, the before- and after- comparison can help the reader visualize the massing, scale and design intent of the proposed project.

Figure 23 shows the existing view of the site, as it appears from the San Bruno Avenue/23rd Street intersection (View 5), and Figure 24 presents a photomontage depicting the view from this location after development of the proposed parking garage. Figure 25 shows the existing view of the site from the San Bruno Avenue/24th Street intersection (View 6), and Figure 26 illustrates the view from this location after development of the proposed project. Figure 15, page 58 indicates the specific locations of the viewpoints.

Landscaping

Specific landscaping plans for the proposed parking structure have not been developed. However, landscaping concepts are indicated on the preliminary plans, elevations, and renderings, and street trees would be planted around the perimeter of the site approximately every 25 feet, except in driveway areas. As shown in the preliminary drawings, broad canopied trees would be planted along the street frontages. Planter boxes and a seven-foot high wrought iron fence would define the other edge of the sidewalks. As shown in Figure 6 (South Elevation), page 22, tiered planter boxes would be provided along the retaining walls outside of the lower levels of the parking structure. The effect of the landscaping would be to soften the edges of the structure and to provide a more interesting and protected pedestrian environment than currently exists. It would also help to reduce glare from vehicle lights and night lighting of the parking structure.

EXISTING CONDITIONS:
VIEW FROM SAN BRUNO AVEN

San Francisco General Hospital
Parking Garage Project

FIGURE 23

Source : Henderson and Associates, 1992

EXISTING CONDITIONS:
VIEW FROM SAN BRUNO AVENUE/23RD STREET
San Francisco General Hospital
Parking Garage Project

FIGURE 23

Source : Henderson and Associates, 1992

PHOTOMONTAGE OF PROPOS
VIEW FROM SAN BRUNO AVE

San Francisco General Hospital
Parking Garage Project

FIGURE 24

Source : Henderson and Associates, 1992

FIGURE 24

PHOTOMONTAGE OF PROPOSED PARKING STRUCTURE:
VIEW FROM SAN BRUNO AVENUE/23RD STREET
San Francisco General Hospital
Parking Garage Project

Source : Henderson and Associates, 1992

EXISTING CONDITIONS:
VIEW FROM SAN BRUNO AVEN

FIGURE 25

San Francisco General Hospital
Parking Garage Project

Source : Henderson and Associates, 1992

EXISTING CONDITIONS:
VIEW FROM SAN BRUNO AVENUE/24TH STREET
San Francisco General Hospital
Parking Garage Project

FIGURE 25

Source : Henderson and Associates, 1992

PHOTOMONTAGE OF PROPOSE
VIEW FROM SAN BRUNO AVEN

San Francisco General Hospital
Parking Garage Project

FIGURE 26

Source : Henderson and Associates, 1992

FIGURE 26

PHOTOMONTAGE OF PROPOSED PARKING STRUCTURE:
VIEW FROM SAN BRUNO AVENUE/24TH STREET

San Francisco General Hospital
Parking Garage Project

Source : Henderson and Associates, 1992

URBAN DESIGN CONSIDERATIONS

The proposed project site is located in a neighborhood with compromised architectural integrity. Several of the residences on Utah Street and the commercial/residential structures on 24th Street have remodeled facades which lack the original architectural details. The 23rd Street corridor is marked by the juxtaposition of the Neo-Italianate architecture of the Gladstone building and the modern, "poured-in-place," concrete Main Hospital building.

Demolition of the existing MUNI facilities would remove surface parking and maintenance equipment from street level view along 24th Street and San Bruno Avenue. The proposed parking structure would represent an extension of the modern, institutional architecture which characterizes the eastern edge of the SFGH campus into the adjoining neighborhood. The parking structure facade would provide details and texture which would help to lessen the contrast between it and surrounding residential buildings. The wrought iron fence surrounding the parking structure would provide security as well as a visual reference to the fence along the Hospital's 23rd Street frontage.

LIGHTING AND GLARE

Detailed lighting plans have not been developed for the proposed garage. The exterior lighting would consist of two post-top 400-watt high pressure sodium lamps at the ground level and six poles with 250-watt lamps on the roof. Light fixture would be shielded and directed downward to avoid nighttime glare at neighboring residences. On the interior of the structure, light fixtures would include 150-watt high pressure sodium lamps, with approximately two fixtures per 1,800 square feet. The ramps in the structure connecting the various levels would be centrally located in the structure along a north-south axis. Thus it is unlikely that headlights from vehicles travelling up and down the ramps would shine over the parking deck walls and onto adjacent residential properties to the east and west. The parking deck walls on each level would be about three feet high on all sides of the parking structure, which would be sufficient to shield the adjacent residential properties to the east and west from direct glare from headlights for the typical vehicle pulling in and out of parking spaces. However, residents on the upper levels of adjacent properties would be able to see vehicle lights on the lower levels of the parking structure. As stated previously, landscaping around the site perimeter would help reduce glare from headlights to adjacent residences.

Exterior and interior lighting in the parking garage and surface parking lot would increase the night time illumination in the neighborhood. Overhead lighting on the upper deck would be visible from the upper floors of residences across the street. Light diffusion during fog and overcast conditions would be apparent throughout the neighborhood.

Hazards -- Public Health and Safety

The project site has been identified to contain hazardous wastes both in the existing building as well as in the subsurface soils and groundwater. Demolition, construction and operational activities associated with the proposed parking garage would result in the potential exposure of persons to hazardous wastes.

HAZARDOUS MATERIALS IN MUNI FACILITY

The existing MUNI structure has been identified as containing dust with hazardous levels of lead, zinc, copper and cadmium. In addition, asbestos is present in the building, and there is a high likelihood that polychlorinated biphenyls (PCBs) are also present. There would be a potential risk of exposure of these substances to workers and, if the hazardous wastes become airborne, the adjacent community could also be exposed during demolition and hauling activities.

The Department of Public Health would require clean-up and removal of contaminants, which typically would be done prior to demolition.[1] The clean-up activities may require additional surveying and sampling of the structure itself as well as of the building materials and dusts within the structure to characterize the building and its contents for demolition.[2] The results of this survey would determine specific clean-up and disposal procedures necessary for removal of all hazardous materials. These procedures would need to comply with all federal, state, and local hazardous waste regulations and could include use of HEPA (High Efficiency Particulate Air) filters to vacuum the contaminated dust or wet mopping or rinsing of dust. Hauling and disposal of contaminated materials and hazardous waste would require an EPA hazardous waste manifest and must be done by a state-certified hazardous waste hauler. Following clean-up and removal of hazardous wastes, confirmation sampling and analysis must be conducted to confirm the adequacy of clean-up procedures, and a written report must then be submitted to the Department of Public Health for approval. Currently, the Bay Area Air Quality Management District (BAAQMD) does not regulate clean-up of contaminated dust.[3] Implementation of such procedures under the direction and approval of the Department of Public Health would minimize the risk of exposure of persons to hazardous materials.

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[1] Hollis, Pam, San Francisco Department of Public Health, 1992. Telephone communication with Pam Hollis on September 8, 1992 and January 7, 1993.

[2] Geare, John, Clayton Environmental Consultants, Inc., 1992. Telephone communication with John Geare on October 15, 1992.

[3] Van Buren, Don, Air Quality Engineer, Enforcement Division, Bay Area Air Quality Management District, 1993. Telephone communication, January 7, 1993.

Asbestos

Asbestos-containing materials may be found within the existing structure on site which is proposed to be demolished as part of the project. Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished including size, age and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The District randomly inspects asbestos removal operations. In addition, the District will inspect any removal operation concerning which a complaint has been received.

The local office of the State Occupational Safety and Health Administration (OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos containing material. Asbestos removal contractors must be certified as such be the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material is required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, the Bureau of Building Inspection would not issue the required permit until the applicant has complied with the notice requirements described above.

These regulations and procedures, already established as a part of the permit review process, would insure that any potential impacts due to asbestos would be reduced to a level of insignificance.

SOIL AND GROUNDWATER CONTAMINATION

In the subsurface materials, there is known contamination of soils and groundwater due to leaking underground tanks that were removed in 1987. The nature and extent of the contamination has been characterized in some detail as discussed in Chapter 3 of this report. During demolition and excavation activities associated with the proposed project, there would be high likelihood of encountering contaminated materials that would result in workers being exposed to the hazardous levels of petroleum hydrocarbons.

In addition, it is unknown whether or not there are additional underground tanks within the site boundaries or if there are other potential sources of contaminants in the subsurface materials beneath the asphalt and concrete slab. Previous land uses at the site over the last 100 years have been associated with vehicle, railroad, and other equipment storage and maintenance,[4] and there is a high likelihood that these uses involved the handling of hazardous materials such as fuels, waste oil, acids, scrap metal, etc. During the site investigations conducted by Harding Lawson Associates, numerous layers of steel track and building materials were encountered. Thus, there is a possibility of encountering hazardous materials during site clearing in other parts of the site not yet characterized. However, due to the extensive investigations associated with characterizing the extent of groundwater contamination from the leaking underground tanks, it is anticipated that no extensive groundwater contamination would be encountered on the site other than the plume already identified.[5] Any non-native materials in the subsurface, if encountered, would most likely be confined to localized "hot spots" in the soils.

Remediation of the contaminated soils and groundwater are currently underway, under the direction of the Department of Public Health and the PUC. These efforts include: operation of a product recovery system to remove petroleum fuel from the groundwater; design of a soil-vapor extraction system to remove contaminants from the soil; and design of a total fluids system to pump out both groundwater and contaminants. It is estimated that remediation efforts will be in operation through mid-1994. The remediation program is designed to minimize the risk of exposure of contaminated materials to workers and the public, with the overall goal of removing petroleum hydrocarbons from soils and groundwater until the levels are not considered hazardous to public health.

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[4] Hupman, Jan M. and Chavez, David, 1992. *Cultural Resources Investigation for the San Francisco General Hospital Parking Garage EIR, San Francisco, California.*

[5] Filippini, Mark, Harding Lawson Associates, 1992. Personal communication with Mark Filippini of Harding Lawson Associates, at a meeting to discuss the status of 24th and Utah remediation project, on September 3, 1992.

The remediation program is being coordinated with the preliminary planning of the proposed parking garage, and demolition activities would exclude any wells, piping and equipment associated with the hazardous materials remediation. It is anticipated that remediation efforts can continue concurrent with the construction and operation of the parking garage as necessary. This may result in the loss of about five parking spaces in the surface lot during the first year of operation.

During demolition and excavation activities, the contractors would be required to be prepared for the potential of encountering hazardous materials in areas not already characterized. The contractors should be alerted for visible evidence of hazardous materials, such as soil discoloration, suspicious odors, or presence of underground tanks, piping or other buried building materials, and should have the capability to take grab samples in areas of suspected contamination. The contractor would also be required to have contingency site safety plans, sampling and investigation plans, and if necessary, disposal/remediation plans. These measures would minimize the risk of exposure of workers and the public to hazardous materials.

Growth Inducement

The proposed project would supply parking to serve the existing parking demand from San Francisco General Hospital and the surrounding neighborhood. There would be no effect on population growth associated with the project. The proposed project would result in about six new jobs associated with operation and maintenance of the new facility.[6] The existing MUNI operations would be relocated prior to demolition of the facilities, and the proposed project would therefore not displace any jobs. Similarly, there would be no extension of services, utilities or roadways, and there would be no effect on housing demand or housing supply in San Francisco.

[6] Personal communication with Kevin Hagerty, Assistant Director, San Francisco Parking Authority, April 15, 1992.

CHAPTER 5
MITIGATION MEASURES

This chapter presents measures that would reduce or eliminate potential environmental impacts of the proposed parking garage. As indicated below, some of the measures have been incorporated into the project design and others are under consideration. For each measure, the implementing agency and the schedule for implementation are indicated. Mitigation measures that have been incorporated in the project design and were presented in the Initial Study are preceded by an asterisk (*), and are also listed in Appendix A, pages A-23 to A-24.

MONITORING OF MITIGATION MEASURES

As of January 1, 1989, state law requires that a reporting or monitoring program be adopted regarding mitigation measures that are made conditions of approval for any project which would otherwise have significant environmental effects. As such, any alternative selected by the project sponsor and proposed to the Board of Supervisors for approval will include a monitoring and/or reporting program to ensure compliance with all mitigation measures required as conditions of approval. The details of such a program, which could include activities by the project sponsor, City agencies, or outside consultants, would be included in the final presentation of the proposed project to the Board of Supervisors.

TRANSPORTATION, CIRCULATION AND PARKING

Measures Included in the Proposed Project

1. At both the 23rd Street/Utah Street and 24th Street/Utah Street intersections, two parking spaces would be removed from both sides of Utah Street to improve the site distance for vehicle traffic that is stop-sign controlled (this is the same as "sight" visibility for motorists entering 23rd and 24th streets). Specifically, one parking space each would be removed from the east and west sides of Utah Street at its exact intersection with 23rd Street and 24th Street, respectively. This would improve the level of service operation at these intersections and improve pedestrian safety.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: Prior to operation of the parking garage

2. Pedestrian crosswalks (north-south) along 23rd Street at Utah Street and at San Bruno Avenue would be clearly marked, and signs would be provided to indicate the presence of the pedestrian crossings to motorists.

Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During operation of the parking garage

3. During construction of the proposed parking garage, truck traffic would likely not cause any delays based on previous calculations. However, a designated truck route would be beneficial to keep traffic circulation around the project site moving efficiently. A truck route would be established (i.e. in or out on 24th Street) which would benefit the actual construction needs as well as having the least impact on traffic circulation. The reason for establishing a truck route is to minimize noise impacts on sensitive areas and to be sure trucks do not use streets which have truck restrictions such as Third Street between Jerrold and Jamestown. Flag persons may also be needed to allow efficient truck movements and to avoid safety problems.
Implementing Agency: San Francisco Parking Authority through construction contractor
Implementation Schedule: Prior to project construction

4. During the construction phase of the project, the construction employee vehicles would be discouraged from parking on-street near the site. In this way, their vehicles would not compete with SFGH employees for parking spaces. Construction employee vehicles can generally be parked in the staging area within the site boundaries, but if necessary, would otherwise park in a designated satellite lot and be shuttled to/from the project site.[1]
Implementing Agency: San Francisco Parking Authority through construction contractor
Implementation Schedule: During project construction

5. With respect to parking garage operations, "Full" signs would be designed into the garage in order to discourage drivers from queuing on city streets outside the garage when it is full. An actual operational plan for the garage would be initiated in regards to entry and exits points and pedestrian interaction. There would also be signs directing people to the proposed garage from Potrero Avenue and from the 24th Street shopping area.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project operation

6. During the PM peak hour, the three outbound lanes from the parking garage onto 24th Street would be designated for left or right turns. Going from east to west, Lanes 1, 2, 3 and 4 would be designated as follows: Lane 1 -- Inbound vehicles; Lane 2 -- Outbound left turning vehicles only for hourly parking patrons; Lane 3 -- Outbound right turning vehicles only for hourly parking patrons; Lane 4 -- Outbound right turning vehicles only for monthly (card holder) parking patrons. These lane

[1] Heard, Stu, SFGH Parking Committee, 1992. Telephone communication on August 27, 1992/

designations would further be enhanced by physically placing temporary orange cones between outbound Lanes 2 and 3 to define left- and right-turning vehicles. Proper signage inside the garage for lane designations would also help vehicle egress.

Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project operation

7. During the peak commute periods, the 23rd Street garage access would be physically blocked off with appropriate signage directing motorists to the 24th Street access. This would prevent potential increases in peak hour and peak period queuing of vehicles at the 23rd/Potrero intersection in the afternoon peak hour and potential queuing of cars into the garage in the morning peak hour. Use of the 23rd Street access to the proposed parking garage would be restricted to nighttime use for security purposes. There would be signs informing garage patrons of the operating hours of the 23rd Street garage access.

   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: During operation of the parking garage

8. During construction, delivery of materials to the job site, particularly concrete and steel, would be scheduled for off-peak hours (9 AM to 3 PM) to the extent possible to reduce interference with commuter travel.

   Implementing Agency: Construction contractor, as required by San Francisco Parking Authority
   Implementation Schedule: During project construction

NOISE

Because of the project's location near sensitive receptors (i.e., San Francisco General Hospital) and proximity to residential uses, the noise reduction measures presented below are identified as mitigation measures. In less sensitive locations such measures would not be deemed mitigative of potentially significant impacts.

Measures Included In the Proposed Project

1. Stationary and mobile equipment, including trucks, used for project construction would utilize the best available noise control techniques (e.g., improved or upgraded mufflers used for hospital construction, equipment redesign, use of silencers, ducts, and engine enclosures) in order to minimize construction noise impacts. Prior to garage construction, all construction equipment (except for impact tools, pavement breakers and jackhammers) would be tested as part of the

environmental compliance monitoring program for enforcement of mitigation measures to ensure that equipment noise does not exceed 80 dBA at 100 feet.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: Prior to project construction

2. During project construction, truck operations would be prohibited during the nighttime hours (8 PM to 7 AM) and the operation of heavy equipment would be limited to the daytime working hours (8 AM to 5 PM, Monday through Friday) to minimize potential disturbance of adjacent residents.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project construction

3. Stationary noise sources would be located as far from adjacent residences as possible. If they must be located near existing residences, they would be enclosed within temporary sheds.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project construction

4. Hydraulically or electrically powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) would be used wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA.[2]
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project construction

5. Landscape trees would be provided along the western and eastern boundaries of the project site. The trees (when mature) would be sufficient in number to lessen the perceived noise impact of the new structure on the second and third levels of adjacent residences.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project design

[2]Bolt, Beranek and Newman, 1971.

Measures Under Consideration

6. The project access in the Phase 2 structure on Utah Street would be located as close to 24th Street as possible (opposite the Gladstone parking lot if possible) to reduce the potential for noise increases at residences on Utah Street.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During Phase 2 project design

AIR QUALITY

Measures Included in the Proposed Project

1. During construction, a program of dirt containment would be implemented to prevent run-off or blow-off from any on-site dirt stockpiles. The project sponsor would require the contractor(s) to spray the site with water during excavation and construction activities; spray unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other material; cover trucks hauling debris, soils, sand or other such material; and sweep surrounding streets during demolition, excavation and construction at least once per day to reduce particulate emissions.

Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor would require that the contractor(s) obtain reclaimed water from the Clean Water Program for this purpose.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project construction

2. The project sponsor would require the contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period. All on-site construction equipment would receive a low-NOx tune-up prior to use at the site and would be re-tuned after 90 days on the job site. Trucks or other equipment would not be left to idle continuously for more than 10 minutes while waiting to load or unload. This would reduce the vehicular emissions from construction vehicles and equipment.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project construction

Measures Under Consideration

4. During construction, all site disturbance activities (e.g., grading, spreading or compaction) would cease when the hourly average wind speed exceeds 25 miles per hour to reduce dispersion of dust emission to the neighborhood and the hospital.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: During project construction

VISUAL QUALITY AND URBAN DESIGN

Measures Included In the Proposed Project

1. A detailed landscaping plan would be prepared for the project that addresses the following: (a) tree, shrub and groundcover species of proposed plantings, including the size and spacing of plants; (b) street tree species that maximize the year-round screening of the parking structure and surface parking lot, while at the same time providing open space at street levels for security (Use of sycamore trees (*Platanus sp.*) would provide visual connection between the landscaping along the Main Hospital's 23rd Street frontage and the proposed parking structure); and (c) specifications for planter boxes, including species selection, automatic irrigation systems, and maintenance requirements.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: During project design

2. Street trees would be planted along San Bruno Avenue, 24th Street and Utah Street. Planting trees would help reduce the amount of illumination shed by night-lighting of the parking structure onto adjacent residences. Street trees would help to unify the streetscape and provide a smoother transition between the parking structure and neighboring uses.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: During project design

3. A detailed lighting plan would be prepared for the project as part of the final design plans. The location and type of light standards for both the surface parking lot and the garage would be specified. Lighting would be designed to provide adequate illumination for the security and safety of vehicles and pedestrians, while minimizing excess illumination or glare at neighboring properties.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: During project design

HAZARDS — PUBLIC HEALTH AND SAFETY

Measures Included in the Proposed Project

1. All phases -- design, demolition, construction, and operation -- of the proposed project would be coordinated with the Department of Public Health and the PUC such that ongoing remediation of contaminated soils and groundwater can continue throughout project implementation without interference. Periodic meetings with all parties would be conducted to communicate status of the remediation and parking projects. This would assure that clean-up and remediation of contaminated soils and groundwater will occur as quickly as possible for the overall benefit to public health and the community.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: All phases of project design, construction, operation

2. Prior to demolition, the MUNI facility would be surveyed and sampled for hazardous materials, including heavy metals in dusts, PCBs, and asbestos. The survey would characterize the structure for demolition and indicate specific measures needed to clean-up, remove and dispose of all hazardous materials and to protect public health. These measures would need to comply with all federal, state and local hazardous waste regulations and could include use of HEPA (High Efficiency Particulate Air) filters to vacuum the contaminated dust or wet mopping or rinsing of dusts; asbestos clean-up would be required to be conducted by a licensed asbestos abatement contractor. Disposal of contaminated materials would need to comply with EPA regulations for hazardous waste. The recommendations in the survey would be implemented such that existing contaminants and hazardous materials would be removed from the MUNI facility prior to demolition, under the direction and approval of the Department of Public Health.
   Implementing Agency: San Francisco Department of Public Health
   Implementation Schedule: Prior to demolition

3. A contingency plan would be developed, and implemented if necessary, to address the potential of encountering hazardous materials in subsurface materials during the course of demolition, excavation and construction.
   Implementing Agency: San Francisco Parking Authority
   Implementation Schedule: Prior to demolition and construction

CULTURAL RESOURCES

Measures Included in the Proposed Project

*1. Should evidence of archaeological resources of potential significance be found during ground disturbance, the project sponsor would immediately notify the Environmental Review Officer (ERO) and would suspend any excavation which the ERO determines could damage such archaeological resources. Excavation or construction activities which might damage discovered cultural resources would be suspended for a total maximum of four weeks over the course of construction.

After notifying the ERO, the project sponsor would select an archaeologist to assist the Office of Environmental Review in determining the significance of the find. The archaeologist would prepare a draft report containing an assessment of the potential significance of the find and recommendations for what measures should be implemented to minimize potential effects on archaeological resources. Based on this report, the ERO would recommend specific additional mitigation measures to be implemented by the project sponsor.

Mitigation measures might include a site security program, additional on-site investigations by the archaeologist, and/or documentation, preservation, and recovery of cultural materials. Finally, the archaeologist would prepare a draft report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the ERO for review. Following approval by the ERO, copies of the final report would be sent to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. The Office of Environmental Review shall receive three copies of the final archaeological report.

Implementing Agency: San Francisco Parking Authority

Implementation Schedule: During construction

GEOLOGY/TOPOGRAPHY

Measures Included In the Proposed Project

*1. A geotechnical investigation would be completed by a California licensed geotechnical engineer prior to the start of construction, and the project sponsor and contractor would implement the recommendations of the geotechnical report regarding excavation and construction for the project.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: Prior to construction

WATER QUALITY

Measures Included In the Proposed Project

*1. During construction, excavation and earthmoving activities would be restricted to the dry season, from April to October.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: Prior to construction

ENERGY

Measures Included In the Proposed Project

*1. The project would be designed to include energy-efficient lighting.
Implementing Agency: San Francisco Parking Authority
Implementation Schedule: During project design

CHAPTER 6
SIGNIFICANT ENVIRONMENTAL EFFECTS

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Sections 15040, 15081 and 15082 of the State CEQA Guidelines, the purpose of this chapter is to identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter 5, Mitigation Measures, pages 117 to 125.

The finding of significant impacts are subject to final determination by the City Planning Commission as part of its certification process for the EIR. This chapter in the Final EIR will be revised, if necessary to reflect the City Planning Commission's findings.

All impacts identified in this EIR could be mitigated to levels considered to be insignificant.

CHAPTER 7
ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with each alternative, and gives the sponsor's reasons for rejection in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the project if the Commission believes the alternative would be more appropriate.

The Initial Study (see Appendix A of this report) identifies five alternatives to the proposed project. The first two alternatives reflect possible mixed uses that could be compatible with surrounding land uses. The third alternative examines alternative locations for the proposed project, as required by CEQA, while the fourth alternative is a reduced-scale version of the project. The fifth alternative is the No Project alternative, as required by CEQA. In addition, this EIR evaluates a sixth alternative, which is a re-configuration of the proposed project on the same site.

The alternatives are developed in a conceptual manner in order to provide a basis for comparative analysis of possible environmental effects relative to the proposed project. For the purposes of comparison, it is assumed that the alternative developments on the proposed site would be restricted to the same height limitations (40 feet maximum) and design guidelines as the proposed project; the total square footage for any structure on the site is assumed to be 450,000 square feet and 350 square feet is needed for each parking stall. No design details or site plans have been developed for the alternatives.

ALTERNATIVE A: PARKING STRUCTURE PLUS RESIDENTIAL USE ALTERNATIVE

Description

This alternative consists of demolition of the existing MUNI facility and construction of a combination of a parking structure and residential uses on the project site. It is assumed that similar to the proposed project, this alternative would use the existing topography, with limited excavation and no underground facilities. It is also assumed that the site would be rezoned to be included in the 24th-Mission Neighborhood Commercial District (NCD). The 80,000-square-foot project site could accommodate approximately 133 dwelling units (assuming one unit per 600 square feet, and no allowance for rear yard or open space) under the 24th-Mission NCD controls. Under these assumptions, this alternative would require a variance for the

rear yard or open space requirement; or alternatively, there could be fewer units which provide adequate allowances for rear yards or open space.

Thus, assuming 1,000 square feet per dwelling unit and a maximum height limitation of 40 feet, there would be approximately 317,000 square feet available for the parking garage, which could accommodate about 900 parking spaces. Similar to other developments in the City, it is assumed that the parking facilities would occupy the lower levels of the structure and the residential units would be on the upper levels. Access would be similar to that of the proposed project.

Impacts

Land Use. Since the structure under this alternative would be similar to the project parking structure, the issues associated with the building's scale or mass would be similar to the proposed project. The proposed structure's approximate 60-foot maximum height along 24th Street would still contrast with the 30-foot high (two-and three-story) buildings in the surrounding neighborhood. While it would appear that provision of residential uses could increase the project's compatibility with surrounding neighborhood residential uses, its compatibility could be affected by the design and density of residences. Since residences would be on upper floors, residential uses would likely be apartments or condominiums. Residential areas adjacent to the site are zoned "RH-2" (House, Two-Family) and "RH-3" (House, Three-Family), except along the 24th Street frontage. The 24th Street frontage is zoned "RM-1" (Mixed residential, low density) east of San Bruno Avenue and "24th Street-Mission Neighborhood Commercial District" west of San Bruno Avenue. Since residential uses would be developed over the entire site and would be apartments, it would not be consistent with the residential densities of adjacent residential uses along Utah Street and San Bruno Avenue. It would, however, be compatible with the "RM-1" and neighborhood commercial zoning along the project's southern boundary. It should also be noted that residential uses would be more compatible with adjacent residential and neighborhood commercial uses than the existing use as a maintenance facility.

As described previously, introduction of residential uses on the project site would require rezoning of the site as a mixed-use project. In addition, in order to be consistent with the provisions of the 24th Street-Mission NCD (as specified in City Planning Code Section 727), this alternative should be designed to be consistent with the existing scale and character of the neighborhood, particularly along the southern street frontage along 24th Street.

Transportation, Circulation and Parking. The Parking/Residential Use Alternative would have similar impacts to the proposed 850-space garage. Assuming one space per unit, there would still be about 767 spaces out of the 900 total available to hospital staff and visitors. Parking impacts, therefore, would not vary substantially from the Phase 1 garage. However, the addition of 133 residential dwelling units and 50 additional parking spaces (900 total) would add to traffic congestion in the immediate project study area. Specifically, the residential dwelling units would generate 84 additional PM peak hour vehicle trips (57 in, 27 out) which would add to intersection volumes at 24th/Utah and 23rd/Utah as well as intersections along Potrero Avenue. The 900-space parking garage would not necessarily generate any new vehicle trips beyond the new residential trips, but would re-distribute about 34 PM peak hour trips to the main garage access on 24th Street. The combination of these two factors may be enough to change the intersection LOS at 24th/Utah and 23rd/Utah from Phase 1 levels. The overall net change in traffic impacts would be less than Phase 2 levels. This alternative would not change any intersection LOS to unacceptable levels (i.e., below LOS "D").

Noise. Construction-related noise impacts associated with this alternative would be similar to those identified for the project. Noise level increases would occur from the proposed residential uses due to traffic increases on surrounding local streets and residential activities on the upper floors of the building. Residential-related noise would be a new source of noise at the project site. Traffic noise levels on surrounding streets would be higher than project-related levels.

Air Quality. Residential uses atop a parking structure would create some air quality concerns as warm exhaust fumes exit the structure and rise along the sides of the building. They may then re-enter open windows of upstairs residential units. Because such a process tends to be intermittent, it would not likely cause air quality standards to be violated. There may, however, be brief periods when exhaust odor may be detectable, especially after a shift change when a large number of cars are "cold-started" and are running inefficiently. Mitigation of such nuisance potential can be accomplished with supplementary exhaust fans discharging at roof level. Although such fans are not necessary to meet ambient standards, they would reduce any odor nuisance.

Visual Quality and Urban Design. This alternative would be similar in scale to the proposed project. The visual impacts due to the height and massing of the structure would be similar to those described in Chapter 4. The development of residential units on the upper levels would provide an opportunity for including contextual architectural features that could help relate the building to nearby residential development.

Hazards. Since this alternative is located at the same site as the project, potential public health concerns associated with the presence of hazardous materials would be the same as for the proposed project.

Growth Inducement. This alternative would be considered re-development of a previously developed parcel and would not extend any new services, utilities or roadways to an undeveloped area. Thus, it would not be considered to be growth inducing. The project could encourage re-development of vacant parcels in the area, but development would be restricted by the current zoning requirements and no intensification of land use would be anticipated.

Short-term vs. Long-term Consequences of Adopting the Proposed Rezoning. In the short term, the proposed rezoning to include the project site in the 24th-Mission NCD would have certain additional impacts as described above. It would also reduce certain impacts upon neighboring properties along 24th Street by providing continuity with the 24th-Mission NCD.

In the long term, the rezoning of the project block would extend the residential uses provided for in the 24th-Mission NCD and preclude future use of the site for public uses or institutional uses related to San Francisco General Hospital.

Irreversible Environmental Changes. The addition of net development potential to the site through a rezoning could result in the use of additional non-renewable energy resources in the form of materials for new construction. Depending on the nature of future development, if any, additional travel demand could result, with associated increases in energy consumption and generation of air quality impacts.

ALTERNATIVE B: PARKING STRUCTURE PLUS COMMERCIAL USE ALTERNATIVE

Description

This alternative consists of demolition of the existing MUNI facility and construction of a combination of a parking structure and commercial uses on the project site. It is assumed that similar to the proposed project, this alternative would use the existing topography, with limited excavation and no underground facilities. It is also assumed that the site would be rezoned to be included in the 24th-Mission NCD. The commercial uses would be located at street level to encourage patronage by both pedestrian and passing motorists, and it is assumed that this alternative would maximize possible commercial uses. Due to the

sloping topography at the site, this arrangement could accommodate about 30,000 square feet of commercial uses at ground level with parking facilities on the upper level at the south end of the site, while at the north end of the site, there could be about 30,000 square feet of commercial uses at street level and parking facilities both above and below the commercial uses. Thus, there would be a total of 60,000 square feet of commercial uses and about 390,000 square feet of parking uses, or about 1,100 parking spaces. It is assumed that access would be similar to that of the proposed project.

Impacts

Land Use. Since the structure under this alternative would be similar to the proposed parking structure, the issues associated with the building's scale or mass would be similar to the proposed project. The proposed structure's approximate 60-foot maximum height along 24th Street would still contrast with the 30-foot high (two-and three-story) buildings in the surrounding neighborhood. Provision of commercial uses on the ground floor along 24th Street would be compatible with the adjacent neighborhood commercial district along 24th Street. Since there are a few neighborhood-serving commercial uses along 23rd Street, development of limited neighborhood-serving commercial uses along this street would be generally consistent with the existing land use pattern. The contrast in project scale and need for transition between the institutional use to the north and neighborhood commercial district to the south could be reduced or addressed if commercial development under this alternative is concentrated on the 24th Street frontage and the upper floors are setback from the street frontage so that the building height is consistent with adjacent buildings.

Similar to the proposed project, the structure's compatibility with adjacent residential uses would depend on the extent of landscaping and setback distances. This is addressed by the project's 11- to 13-foot building setback, proposed landscaping, and street trees.

Introduction of commercial uses on the project site could require rezoning of the site. In addition, the scale of the project (at least the southern street frontage) would need to be consistent with the provisions of the 24th Street-Mission NCD (as specified in City Planning Code Section 727).

Transportation, Circulation and Parking. The proposed Parking/Commercial Use Alternative would consist of an 1,100 space parking garage as well as 60,00 square feet of commercial-retail uses. The 1,100 space garage would have similar impacts to the proposed Phase 2, 1,200-space garage. However, the 60,000 square feet of commercial-retail space has the potential to generate 474 additional PM peak hour vehicle

trips (237 in, 237 out). The retail-commercial space would be located on both 23rd Street and 24th Street. Due to the relatively high trip generation from the commercial-retail uses, intersection LOS at 24th/Utah, 24th/San Bruno, 23rd/Utah, and 23/San Bruno would degrade. It is likely that the Potrero intersections at 23rd and 24th Streets would notice increased traffic congestion and potential degradation of service levels to below LOS "D," thereby generating a potentially significant traffic impact.

Noise. Construction-related noise impacts under this alternative would be similar to those identified for the project. However, noise level increases on local roadways would be greater under this alternative than under the project. This alternative would result in higher traffic levels on surrounding and nearby local streets, resulting in higher traffic noise levels. Operational noise associated with the parking garage use would be the same as under the proposed project.

Air Quality. Ambient air quality outside the parking structure for the proposed project was shown to be within acceptable levels. Commercial use patrons and employees would not be exposed to unacceptable levels of air pollution. This alternative would have increased emissions, both on a microscale and regional scale, compared to the proposed project due to the increased traffic associated with commercial customers.

Visual Quality and Urban Design. This alternative would be similar in scale and form to the proposed parking structure. Inclusion of commercial uses along the ground floor of the 23rd Street and 24th Street frontages would help to integrate the project with the existing neighborhood and commercial district along 24th Street. Depending on building setbacks and proposed landscaping, this alternative could act as a transition between the adjacent residential/commercial uses and the institutional uses to the north.

Hazards. Since this alternative is located at the same site as the project, potential public health concerns associated with the presence of hazardous materials would be the same as for the proposed project.

Growth Inducement. The impacts would be the same as for Alternative A.

Short-term vs. Long-term Consequences of Adopting the Proposed Rezoning. In the short term, the proposed rezoning to include the project site in the 24th-Mission NCD would have certain additional impacts as described above. It would also reduce certain impacts upon neighboring properties along 24th Street by providing continuity with the 24th-Mission NCD.

In the long term, the rezoning of the project block would extend the commercial uses provided for in the 24th-Mission NCD and preclude future use of the site for public uses or institutional uses related to San Francisco General Hospital.

Irreversible Environmental Changes. The addition of net development potential to the site through a rezoning could result in the use of additional non-renewable energy resources in the form of materials for new construction. Depending on the nature of future development, if any, additional travel demand could result, with associated increases in energy consumption and generation of air quality impacts.

ALTERNATIVE C: OFF-SITE ALTERNATIVES

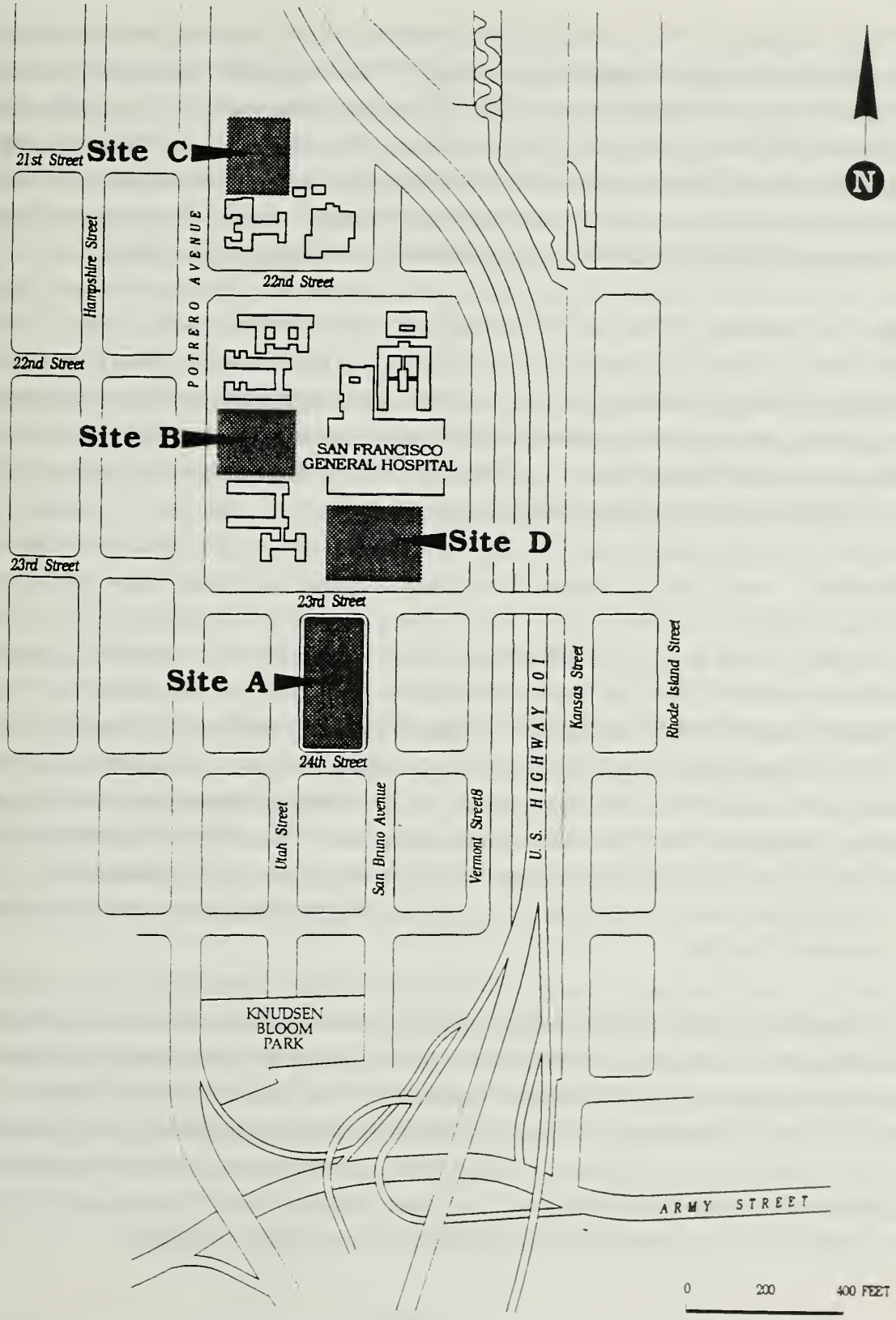
Description

The SFGH Institutional Master Plan (1987) included a parking garage study which examined alternate locations for a parking garage based on four assumptions: (1) need for approximately 1,000 cars; (2) 350 square feet per parking stall; (3) minimum construction cost per stall; and (4) structure height comparable to surrounding existing buildings. Four locations were evaluated, Sites A through D, with the first location being the proposed site on the block between 23rd, 24th and Utah streets and San Bruno Avenue. The other three off-site locations are: (1) Site B -- the open space surrounded by SFGH Buildings 20 and 30, Potrero Avenue and the Main Hospital Building; (2) Site C -- the site north of SFGH Building 80/90 and south of the proposed Mental Health Center; and (3) Site D -- SFGH parking lot C, adjacent to the Main Hospital Building and north of 23rd Avenue. Figure 27 shows the location of the three off-site alternatives.

Site B is approximately 210 feet by 185 feet, and the surrounding buildings are about 60 feet in height. With one level below grade, a garage of this height could accommodate eight levels of parking with approximately 888 parking stalls. There are underground tunnels used for service, steam and power distribution beneath the site, and the structural impacts of constructing a parking garage are unknown. The site is also located on the only green open space associated with the hospital, which serves as the focal point and main entry to the hospital and a view corridor to Twin Peaks. The project sponsor has eliminated this site from further consideration due to the inability to accommodate the required number of parking spaces, the structural unknowns, and the loss of open space and visual impacts.

)CATIONS OF OFF-SITE ALTERNATIVES
n Francisco General Hospital
king Garage Project

FIGURE 27



: Orion Environmental Associates, 1992

Site C is 232 feet by 116 feet, and due to the topography and soil conditions, there could only be four levels of primarily underground parking constructed at this site. With these restrictions, the site could accommodate about 307 parking stalls. This site has been designated for a 131-space surface parking lot as part of the Mental Health Skilled Nursing Facility. Thus, the net increase in parking spaces would be about 176 spaces. The project sponsor has eliminated this site from further consideration due to the limited size and the higher cost per stall for constructing underground parking. This site would also preclude any expansion capabilities for the parking garage as well as for the surrounding buildings.

Site D is 225 feet by 180 feet, and is bordered by the Main Hospital Building, Building 9 (Administration), 23rd Street, the emergency access drive and parking. The Main Hospital Building is about 100 feet tall and buildings across 23rd Street are about 30 feet tall. Using an average of these two heights, the resulting height for a garage at this location would be 65 feet or 8 levels, accommodating about 925 parking stalls. The access to this site would be on 23rd Street. The site has been designated as an ambulatory care zone in the SFGH Long Range Development Plan.

Impacts

Land Use — Sites B, C, D, or combined C and D. Development of the parking garage on the SFGH campus would avoid the land use compatibility issues identified for the project site in this EIR. This alternative would maintain existing SFGH campus boundaries, and the garage would be closer for SFGH users. However, the parking garage at these locations would not be convenient for the 24th Street commercial use patrons. The existing MUNI use would still be relocated from the site regardless of the parking garage location. Similar land use compatibility issues would likely arise with any future use of the building by the PUC/MUNI, or redevelopment of the site for other hospital-related uses. Cumulative land use compatibility issues would occur with any re-use of the site and development of the Gladstone building to the west of the site.

Transportation, Circulation and Parking -- Site B. A garage at this site could accommodate about 888 parking stalls. This would have similar impacts to the proposed 850-space garage. Approximately 593 peak hour vehicle trips would be re-distributed to the site. Of these trips, 477 would be outbound during the PM peak hour and the remaining 116 inbound. The intersections that would likely be affected the most would be 23rd/Potrero and 22nd/Potrero. This site would have the advantage of evenly distributing the parking garage traffic onto both 22nd Street and 23rd Street. However, with no direct access onto Potrero Street, the main hospital entrance drive would experience increased traffic congestion.

Transportation, Circulation and Parking -- Site C. The proposed garage would accommodate about 300 parking stalls. This would re-distribute only 200 vehicle trips to the site during the PM peak hours. An estimated 161 trips would be outbound and 39 inbound during the PM peak hour. All traffic from Site C would be focused on 22nd Street, but with a relatively low number of vehicles accessing Site C, intersections LOS would likely remain unchanged. Vehicle access onto Potrero Avenue (right-turn-only) would be beneficial for this location by reducing outbound vehicle delays. On-street parking demand in the neighborhood, however, would still be in excess of 700 spaces, and the parking shortage at SFGH would still exist.

Transportation, Circulation and Parking -- Site D. A parking garage at this site could accommodate about 925 stalls. This would re-distribute about 617 vehicle trips directly onto 23rd Street. An estimated 496 trips would be inbound and 12 outbound during the PM peak hour. This site has a major disadvantage of loading all it traffic onto 23rd Street. It is likely that congestion at the intersection of 23rd/Potrero Avenue would force motorists south to 24th or 25th street in order to gain access to Potrero Avenue. Intersection LOS at 23rd/Potrero would degrade and safety problems would increase at this location. It is likely that intersection LOS at this location would degrade below LOS "D," thereby causing a potentially significant traffic impact.

Transportation, Circulation and Parking -- Sites C and D. Using a combination of Sites C and D for construction of a parking garage would likely result in similar vehicle access conditions that SFGH currently experiences. The overall number of available parking spaces would increase and on-street parking demand would likely be reduced. One of the main employee parking lots is located off 22nd Street, and this would not change. There would still be traffic congestion on 23rd Street with Site D, as most of the project traffic would be to/from Potrero Avenue via 23rd Street.

Noise -- Sites B, C, D, or combined C and D. Development of the parking garage on the SFGH campus would increase the proximity of construction-related noise to hospital patients. Construction-related noise impacts would vary depending on the proximity of the construction activity to the hospital's patient areas. Operational noise peaks associated with the parking garage (e.g., slamming car doors, engine start-ups, vehicles driving up and down ramps, squealing tires, and possibly car horns) could also be more noticeable with the increased proximity to hospital facilities.

Noise -- Site B. Since most traffic would utilize 22nd and 23rd streets to access the parking garage, project-related traffic noise increases on Utah Street and San Bruno Avenue would be avoided.

Noise -- Site C. Project-related traffic noise increases on all streets surrounding the project site would be avoided under this alternative since all traffic would use 22nd Street to access this alternative site.

Noise -- Site D. Traffic noise increases on 23rd Street would be greater under this alternative than under the proposed project. However, traffic noise increases on Utah Street and San Bruno Avenue would likely be less under this alternative than under the proposed project.

Noise -- Sites C and D. Noise impacts would be as discussed above under Sites C and Site D.

Air Quality. A garage at either Site B, C or D, or at a combination of them, would be constructed closer to patient rooms and medical services than the proposed project. Construction activity impacts (dust and exhaust) may temporarily affect hospital operations with a slightly increased patient health risk. A garage at Site C would include primarily underground parking which would require exhaust fans to ventilate underground levels. The fan exhaust would be a concentrated point source of air pollution that would then disperse across the hospital campus. A garage at Site D would result in increased traffic congestion along 23rd Street and Potrero, with associated increases in air emissions due to the lower travel speeds. This localized increase in air emissions would be directly adjacent to the hospital, which is considered a sensitive receptor.

Visual Quality and Urban Design -- Site B. Development of a parking structure on this site would eliminate the primary open space/plaza on the SFGH campus and would obstruct the views of Twin Peaks from the SFGH campus. The architectural features of the parking garage, as proposed would contrast with the neo-Italianate architecture of the existing hospital facilities which line Potrero Avenue.

Visual Quality and Urban Design -- Site C. This site is located between the Skilled Nursing Facility site and Building 80/90, an Art Deco structure built in 1932. Development of a parking structure on this site would increase the visual density of development on the north end of the SFGH campus. As currently designed, the parking garage would contrast with the brick hospital buildings along Potrero Avenue.

Visual Quality and Urban Design -- Site D. This site lies immediately south of the Main Hospital. Development of a parking structure in this area would eliminate the setback between 23rd Avenue and the

eight-story Main Hospital Building. Since development on this site would not require subsurface parking levels, the average height of the parking structure would be approximately 65 feet. This would provide a transition between the 100-foot high Main Hospital Building and the 30- to 35-foot high buildings across 23rd Street. The landscaped greenery in the existing parking area would be eliminated.

Visual Quality and Urban Design -- Sites C and D. Combined development of parking structures on these two sites would have the visual effects discussed under Site C and Site D, above.

Hazards. Construction of a parking garage at any of the off-site locations would avoid the potential exposure to hazardous materials that are present on the project site. However, the potential for hazardous materials to be present at any of the off-site locations is unknown. Soil and groundwater remediation efforts will continue at the project site, regardless of the project location.

Growth Inducement. Construction of parking garage at any of the sites within the SFGH campus would be an intensification of existing land use and would not be considered growth inducing.

ALTERNATIVE D: REDUCED-SCALE PARKING GARAGE ALTERNATIVE

This alternative consists of building a 850-space parking garage at the proposed site or limiting the proposed project to only the first phase. The environmental effects of this alternative have been incorporated into the analysis of the proposed project in Chapters 3, 4, and 5 of this report.

ALTERNATIVE E: RE-CONFIGURED PARKING STRUCTURE

The re-configured parking structure would consist of a re-configuration of the proposed project constructed at the proposed site, with the same number of parking spaces and the same access points. The only difference would be that the parking structure would occupy approximately the eastern half of the block bound by 23rd Street, San Bruno Avenue, 24th Street, and Utah Street, and that the western half of the block would remain vacant for unspecified future uses. At buildout, the parking structure would be 125 feet wide, 400 feet long, and an average height of 65 feet along San Bruno Avenue. The proposed garage would no longer border Utah Street, and therefore there would be no future access onto Utah Street. The northern portion of the structure (about one third) would have 8 levels of parking (7 stories with roof top parking), and

the southern two thirds of the structure would have 7 levels of parking (6 stories with roof top parking), so that the entire structure would have a stepped roof. Similar to the proposed project, the northern part of the structure would be about 1 to 1½ stories below grade. Unlike the proposed project, the construction of this alternative would be phased such that the southern portion of the structure would be constructed first, and the northern portion second. This alternative would exceed the current 40-foot height limit for the site and would require a height re-classification of the site to a 65-foot height limit.

This alternative could also be developed without a height re-classification in one of two ways. The first way would be to build at the existing project grade within the current height limit. This would result in a reduced number of total parking spaces. Under this variant, the northern portion of the structure would have seven levels of parking and the southern two-thirds of the structure would have six levels of parking, for a total of approximately 950 spaces. The second variant of this alternative would be to include one additional below-grade garage level to accommodate a total of 1,200 spaces within the 40-foot height limit. The northern portion of the site would then be two and one-half stories below the surrounding grade (as opposed to one and one-half stories for the existing project site) and the southern portion of the site would be one story below grade (as opposed to at grade for the existing project site). This variant would include a full-story of excavation as opposed to construction on the existing project grade that was analyzed under the proposed project and all other new-construction alternatives. Such excavation at the site could have additional environmental impacts, including but not limited to: potential exposure of workers to hazardous wastes; construction noise, traffic and air quality effects; and cultural resources impacts. These additional potential impacts would need to be analyzed prior to any approval of a sub-grade alternative.

As discussed, the first variant to Alternative E, no re-classification and no excavation, would result in a total of approximately 950 spaces. This alternative variant would have transportation and related air quality impacts that would fall between the impacts of Phase 1 and Phase 2 of the preferred project. Similarly, net parking deficits would be less than Phase 1 and greater than Phase 2 of the preferred project. Urban design impacts would generally be reduced compared to the main Alternative E, due to the reduced height and would be similar to the preferred project, although the project would be set-back one-half block from Utah Street, as with the main Alternative E.

The second variant, no height re-classification and 1,200 parking spaces with sub-grade parking levels would have transportation and associated impacts identical to the main Alternative E. Other impacts related to building design and height would be the same as variant one to Alternative E, as this variant would be 40 feet tall and therefore physically identical to variant one, above grade. As discussed above, impacts

associated with the additional excavation have not been assessed and would need to be addressed prior to any approval of this variant.

Land Use. Land use compatibility issues would be similar to the proposed project. However, the contrast between the heights of the proposed parking structure and the residences to the east would be greater under this alternative since the parking structure would be higher. The taller structure would cast shadows on residences to the east for slightly longer periods during the late afternoon than would occur under the proposed project. Also, during the winter months, areas to the north would be shaded by the parking structure and the area affected by such shading would be greater under this alternative than with the proposed project. Winter shading would be expected to affect only the area north of the parking structure, which includes the southern margin of the SFGH campus, just north of 23rd Street.

This alternative would require a height re-classification to 65 feet. The proposed structure would be subject to Section 295 of the City Planning Code; this code section was adopted in response to Proposition K (passed November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Department by any structure exceeding 40 feet in height unless the City Planning Commission finds the impact to be insignificant. To document project conformance with Section 295, a shadow fan analysis would need to be prepared by the Department of City Planning. This analysis would verify whether the project would shade public areas subject to Section 295. There are no public open spaces in the immediate vicinity of the project that are likely to be shaded by development on this site. McKinley Square begins approximately one-quarter mile north of the site. The majority of the park lies east of the freeway. Given the distance to the park, the presence of a number of intervening buildings on the SFGH campus, and the fact that the park lies almost directly to the north of the project site (and therefore in a direction where shadows are not as lengthy as to the northeast or northwest), it is unlikely that new shadows would be cast on this open space by development of up to 65 feet in height on the project site. There is a mini-park on 24th Street approximately four blocks west of the site. Preliminary analysis indicates that given this distance and the proposed height for this alternative, the structure would not be expected to shade this park.

Under this alternative, the western portion of the block would be left undeveloped at this time. By providing for additional allowable height on the project block, the height re-classification would result in a net increase in allowable development of the entire block. Thus, additional unspecified public uses could be developed on the block with associated potential environmental impacts. Any proposal for new development of this

portion of the project block would be subject to separate environmental review. So long as this area remains zoned "P," only public uses would be allowable. Development of the site for non-public uses would require a further re-classification of the use district, presumably to a zoning consistent with the adjacent residential zonings of RH-2 (House, Two-Family) or RM-1 (Mixed Residential, Low Density) or the neighborhood commercial zoning of 24th Street (24th-Mission Street NCD). Any re-classification of the site would require additional environmental review and approval of the City Planning Commission and the Board of Supervisors. Under any non-public zoning, new development would be constrained by additional controls beyond the height limit, such as Floor Area Ratio limits, rear yard and open space requirements, and other applicable standards of the City Planning Code.

Transportation, Circulation and Parking. Under this alternative, it is assumed that the primary access to the garage would be from 24th Street with nighttime only access on 23rd Street, similar to the proposed project. Traffic and parking impacts would be similar to the proposed project, since the number of parking spaces, phasing and access points would be similar to the proposed project. However, as with the proposed project, a secondary access point would be needed for the Phase 2, 1,200-space garage (other than 23rd Street) to provide adequate vehicle access. This secondary access point would likely front along San Bruno Avenue and would have the potential to affect residential neighborhoods along this street. Additionally, as a result of this alternative, peak hour traffic volumes would increase at the intersections of 24th/San Bruno and 23rd/San Bruno but would not be expected to degrade below LOS "D."

Noise. Noise impacts of the re-configured alternative would be similar to the proposed project, although they would be concentrated along San Bruno Avenue in the vicinity of existing residential uses. It is anticipated that there would be increased noise levels associated with increased traffic along San Bruno Avenue. Noise levels along San Bruno Avenue that are associated with parking cars within the structure would be similar to the proposed project.

Air Quality. Air quality impacts would be similar to the proposed project, although there may be a slight increase of localized carbon monoxide emissions at 23rd/San Bruno and 24th/San Bruno intersections and a slight decrease in emissions at 23rd/Utah and 24th/Utah due to the re-distribution of traffic. However, it is not expected that the increased CO concentrations would exceed state or federal standards. Localized emissions within and adjacent to the parking structure would be similar to the proposed project.

Visual Quality and Urban Design. Under the re-configured parking structure alternative, the proposed structure would be an average height of about 65 feet along San Bruno Avenue, compared to 40 feet for the

proposed project. The structure at buildout would cover the entire frontage along San Bruno Avenue between 23rd and 24th streets, resulting in a contrast with the scale and massing of the surrounding residential/commercial buildings that would be more intense than the proposed project. The parking structure at 65 feet in height would be more than twice the height of the surrounding residential and commerical uses (about 30 feet in height) along San Bruno Avenue and 24th Street. The structure would be visually compatible with the scale and massing of the eight-story Main Hospital building north of 23rd Street. Depending on the architectural treatment of the parking structure under this alternative, the structure could be designed to reduce the apparent mass and to be consistent with the existing neighborhood color scheme. However, it would still appear larger than the proposed project. Landscaping plans could also serve to visually reduce the contrast of the proposed structure with the surrounding residential/commercial uses and to reduce the glare from vehicle lights and nighttime lighting of the parking structure.

Hazards. Since this alternative is located at the same site as the project, potential public health concerns associated with the presence of hazardous materials would be the same as for the proposed project. However, Phase 1 construction of the structure would focus on the southeast corner of the project site and could potentially interfere with on-going groundwater remediation efforts. Coordination with the Department of Public Health and the remediation contractors would be necessary during project design and operation to ensure that remediation efforts can continue without interruption. It is anticipated that remediation would continue for three to five years, with possibly continued monitoring requirements, such that there may be loss of parking spaces in this area of the garage to allow continued remediation and monitoring.

Growth Inducement. The impacts would be the same as for the proposed project.

Short-term vs. Long-term Consequences of Adopting the Proposed Rezoning. In the short term, the proposed height reclassification and garage development as described above would have certain additional impacts due to building height, as indicated. It would also reduce certain impacts upon neighboring properties along Utah Street by the increased distance between the garage use and residential properties.

In the long term, a height reclassification of the project block could allow for a net increase in the overall intensity of use of the project block with concomitant environmental impacts as described above. It would also allow flexibility in the nature of use of the project block by providing the proposed additional parking in a more compact space. Under the current "P" zoning, future use of the undeveloped portion of the block would be devoted to public uses, presumably of benefit to surrounding residents and/or the City as a whole.

Irreversible Environmental Changes. The addition of net development potential to the site through a height reclassification could result in the use of additional non-renewable energy resources in the form of materials for new construction. Depending on the nature of future development, if any, additional travel demand could result, with associated increases in energy consumption and generation of air quality impacts.

ALTERNATIVE F: NO PROJECT ALTERNATIVE

This alternative would consist of leaving the existing facilities as is, and there would be no construction of a parking garage. The MUNI operations would be relocated, regardless of the proposed project, although the schedule for relocation may change. Demolition of the existing structures on the project site is unknown. Hazardous materials remediation, however, would continue under the direction of the Department of Public Health. When MUNI facilities are relocated and if the structures on the site are demolished, the proposed site could become available for development of other allowable uses under the "P" zoning designation. There would be no parking garage built in the vicinity of the hospital, and the existing parking shortages on the hospital campus and in the surrounding neighborhoods would continue as is.

Land use compatibility and noise issues similar to those associated with the proposed project would likely arise with any future use of the building by the PUC/MUNI, or redevelopment of the site for other hospital-related uses. Cumulative land use compatibility issues would still arise with any re-use of the site and development of the Gladstone building to the west of the site. Existing traffic, noise and air quality conditions would continue as is, and discussed in Chapter 3, Environmental Setting, of this report.

Under this alternative, the existing visual/aesthetic conditions on the site would continue for an indefinite time period, depending on the relocation and demolition of the MUNI facilities. The aesthetic benefits associated with the proposed project, such as landscaping and street tree planting around the parking structure, would not be achieved.

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APPENDICES

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APPENDIX A. INITIAL STUDY

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: July 17, 1992

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister Street - 6th Floor, San Francisco, CA 94102

Agency Contact Person: Jim McCormick **Telephone:** (415) 558-6394

Project Title: 88.271E S. F. General Hospital Garage **Project Sponsor:** S. F. Parking Authority

Project Contact Person: Kevin M. Hagerty, Director Parking Authority

---

Project Address: City block bound by 23rd and 24th streets, Utah Street and San Bruno Avenue

Assessor's Block(s) and Lot(s): 4213

City and County: San Francisco

Project Description: The San Francisco Parking Authority is proposing to construct an 850- to 1200-space parking garage adjacent to the San Francisco General Hospital. It would include demolition of existing MUNI facilities that will be relocated. The garage would be built in two phases, with the first phase consisting of a six-level, 40-feet high structure on the northern part of the site and a surface lot on the southern part of the site, providing a total of 850 spaces. The second phase would consist of construction of a multi-level parking structure on the southern part of the site that would increase the total capacity of the project to 1,200 spaces. Primary access to the garage would be on 24th Street and secondary access on 23rd Street.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Section 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination
to the City Planning Commission: July 27, 1992

An appeal requires: 1) a letter specifying the grounds for the appeal, and;
2) a $75.00 filing fee.

for Barbara W. Sahm
Environmental Review Officer

OER:10

6/89

INITIAL STUDY FOR THE
SAN FRANCISCO GENERAL HOSPITAL PARKING GARAGE

I. INTRODUCTION AND PROJECT DESCRIPTION

The San Francisco Parking Authority is proposing to construct an 850- to 1200-space parking facility adjacent to the San Francisco General Hospital (SFGH). It would be located on the entire city block (200 by 400 feet or 80,000 square feet) bounded by 23rd Street, Utah Street, San Bruno Avenue and 24th Street, Assessor's Block 4213, in the City and County of San Francisco, directly south of the hospital. The location of the project site is shown in Figure 1.

The parking facility is intended to serve the hospital staff, patients and visitors as well as patrons of the 24th Street commercial neighborhood district and neighborhood residents. The San Francisco General Hospital Medical Center Institutional Master Plan (1987) recommended the proposed location as the site for construction of a parking garage.[1]

Currently, there is an existing facility on the project site, consisting of a warehouse-type structure located on the northern two-thirds of the block, with the remainder of the site used for vehicle parking. The existing facility and site are owned by the City's Public Utilities Commission (PUC) and used to house three Municipal Railway (MUNI) operations: Ways and Structures Division, special machine shops, and non-revenue vehicle (service-related vehicles, not buses) maintenance. On September 22, 1987, the PUC declared the project site as "surplus"[2] and is currently planning to relocate the existing operations. The San Francisco Parking Authority is currently negotiating with PUC to develop the site as a parking garage.

Hazardous materials have been identified on the site. In 1987, nine underground storage tanks were removed from the southeast quadrant of the site, and there was evidence that leaks in the tanks had resulted in contamination of soils on the site with petroleum products. Further site characterization in 1989 indicated that petroleum hydrocarbons, measured as gasoline and diesel, were present in the soils and groundwater at the site in concentrations considered hazardous by the Regional Water Quality Control Board, San Francisco Region.[3] Remediation of the contaminated materials is required. The PUC and San Francisco

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[1] City and County of San Francisco, Department of Public Health, 1987. *San Francisco General Hospital Medical Center Institutional Master Plan.* Kaplan, McLaughlin, Diaz and Gordon H. Chong & Associates Architects. November 1987.

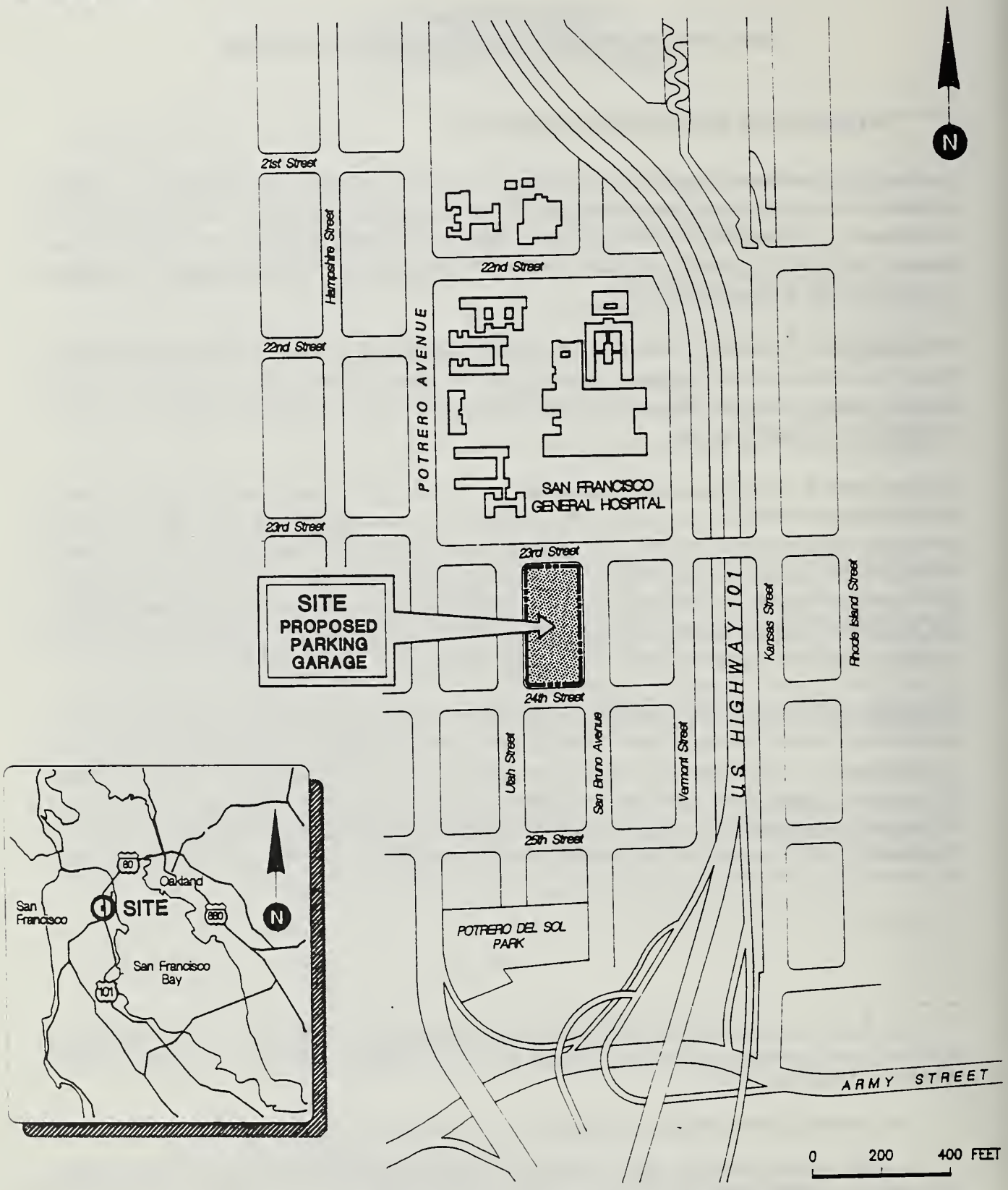
[2] San Francisco Public Utilities Commission, 1987. Resolution No. 87-0379.

[3] Harding Lawson Associates, 1989. *Preliminary Petroleum Leak Investigation Muni Maintenance Facility 24th and Utah Street Garage, San Francisco,California.* Prepared for City and County of San Francisco, Department of Public Works, Bureau of Architecture, March 9, 1989.

SITE LOCATION

San Francisco General Hospital
Parking Garage Project

FIGURE 1



Source : Orion Environmental Associates, 1992

Department of Public Health are currently overseeing further hazardous materials investigations and remediation efforts.[4, 5]

The proposed project consists of demolition of the existing building and construction of parking facilities with an ultimate capacity of 1,200 parking spaces. The parking facilities would be built in two phases, with the first phase accommodating approximately 850 spaces and the second phase increasing the capacity of the parking facilities to accommodate a total of 1,200 parking spaces.

The first phase of construction would include a parking structure with the capacity of approximately 780 spaces and a surface parking lot with about 70 spaces, yielding a total parking capacity of approximately 850 spaces for the entire site. The main entrance/exit to the site would be located on 24th Street, and there would be a secondary access on 23rd Street. Figure 2 depicts the preliminary site plan for the first phase of construction. The 24th Street access would be at grade. The 23rd Street access would be at the third level of the parking structure due to the grade change of surrounding streets.

About half of the parking spaces on the site would be designed as standard-size stalls, and half would be compact stalls, with 32 handicapped-designated stalls inside the parking structure. Fees would be charged for parking in the garage, and there would be an attendant on duty 24 hours per day.

The parking structure would be located on the northern two-thirds of the site located closest to 23rd Street and would be a six-level structure with rooftop parking. There would be about 1½ to 2 levels below grade on the northern portion of the structure, comparable to the existing facility, while the surface lot on the southern part of the site would be at grade, since the site slopes downhill from northeast to southwest. The maximum height of the structure as measured under the City Planning Code would be 40 feet to the finish floor of the roof, not including the parapet or guard rails; due to the sloping topography, this "maximum" height may include averaging at certain points of measurement. The proposed building height would be approximately the same as that of the existing MUNI structure.

The structure would be designed as a ramp-access, open parking garage, with a series of interconnecting ramps between floors that would permit the movement of vehicles. The structure would be designed to be open on all sides where possible to provide natural ventilation. Other design criteria for the parking structure design include security considerations and circulation patterns that would minimize the amount of queuing on the streets surrounding the site.

The gross area of the parking structure would be approximately 300 square feet per typical stall size, excluding handicap stalls. A portion of the structure would be designed with sufficient height to accommodate special van parking. There would be two elevators stopping at each level of the parking

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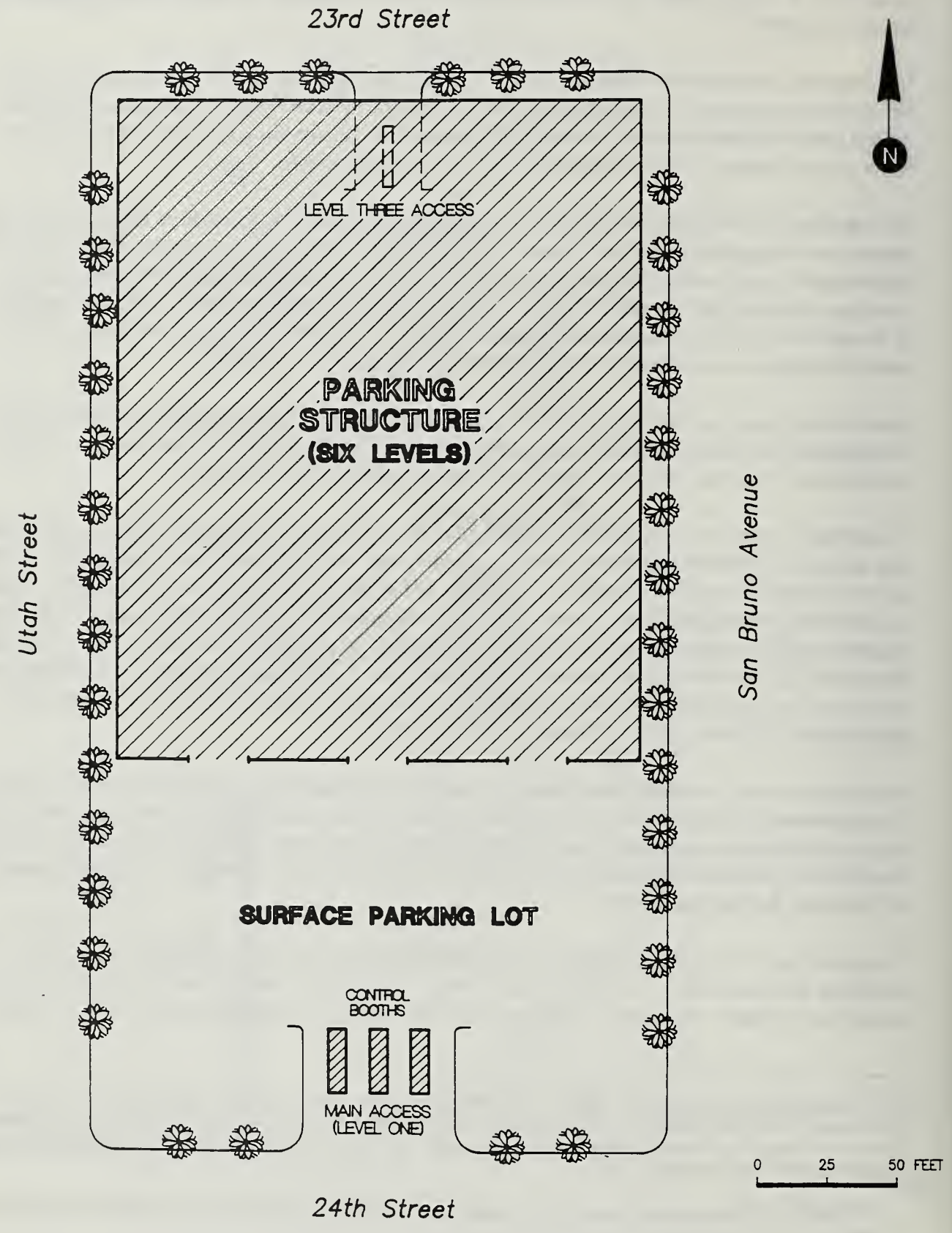
[4] Harding Lawson Associates, 1990. Draft Letter from James Ordons, Project Geologist, Harding Lawson Associates to Mr. Larry James, Project Manager, Public Utilities Commission regarding proposal for Phase III Product Recovery/Remedial Action Feasibility Study, 24th and Utah Maintenance Facility, San Francisco, California dated September 6, 1990.

[5] Telephone communication with Scott Nakamura, San Francisco Department of Public Health, March 9, 1992.

PRELIMINARY SITE PLAN (PHASE I) **FIGURE 2**

San Francisco General Hospital Parking Garage Project



Source : Fong & Chan Architects, 1992

structure to serve pedestrian circulation, with stair access at each level as necessary. The structure would also include miscellaneous facilities such as a staff toilet room, storage room for maintenance equipment,and an electrical room.

The second phase of the construction would increase the parking capacity of the site to 1,200 spaces by constructing a parking structure on the surface parking lot on the south side of the site. Operation of the phase one parking structure could be maintained during construction of the phase two parking structure.

Demolition of the existing facility and construction of the first phase parking garage would require about 18 months. The first phase parking structure is planned to be in operation by July 1994, concurrent with the scheduled completion of the Mental Health Skilled Nursing Facility. Estimated construction cost of the proposed parking facility is about $12.8 million for the first phase of construction and approximately $19.2 million for the total construction costs.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

This section presents a brief description of the existing environmental conditions at the project site and provides a preliminary assessment of the potential environmental effects associated with implementation of the proposed project. The impact assessment under each environmental topic identifies potential impacts and mitigation measures for identified impacts wherever possible.

Some project-specific effects have been determined to be potentially significant, and will be analyzed in an Environmental Impact Report (EIR). Other effects were determined either to be insignificant or to be mitigated to levels considered insignificant through measures included in the project. These items require no further environmental analysis and will not be included in the EIR.

Potentially Significant Effects

Some of the effects that would be generated by the proposed project could be significant and will be analyzed in the EIR. Impact topics that will be further analyzed in the EIR are as follows: land use; transportation and circulation; noise; air quality; groundwater hydrology (as it relates to hazardous materials investigations); and hazardous materials. Other issues that will be included in the EIR for informational purposes are: relevant Master Plan policies as they would apply to the proposed project; and urban design and visual quality.

Insignificant Effects

Some environmental effects would either be insignificant or mitigated to levels of insignificance through measures incorporated into the project design. These require no further environmental analysis and will not be addressed in the EIR. Insignificant effects are briefly discussed as follows (see Sections IIA through IID for more details):

Population/growth inducement: The project would not induce substantial growth or concentration of population, displace a large number of people, or create a substantial demand for additional housing or substantially reduce the housing supply in San Francisco.

Utilities and Public Services: The project would not increase the demand for utilities or public services compared to the existing facility.

Vegetation and wildlife: The project site is currently devoid of any vegetation or wildlife habitat, and the project would not affect this condition.

Geology and Topography: The project would not substantially alter the grading at the site and would utilize the existing topography. A geotechnical investigation would be completed by a California licensed geotechnical engineer prior to the start of construction, and the project sponsor and contractor would implement the recommendations of the geotechnical report regarding excavation and construction for the project.

Water Quality: The project would have no effect on a public water supply, and mitigation measures would be included to ensure that the project would not degrade water quality in either surface water or groundwater.

Historical Architecture: The existing structure has been determined to be a structure of "low architectural quality and compromised integrity" and the San Francisco Landmarks Preservation Advisory Board did not find that the building warranted protection as an historic structure.

Cultural Resources: An archival review of the project site for cultural resources determined that there is little potential for encountering prehistoric sites or eighteenth or nineteenth century historic or archaeological deposits or remains during construction of the proposed project. Measures included in the project would mitigate potential impacts on cultural resources that might be encountered during construction.

Energy. The project would require energy in the forms of fossil fuels and electricity during construction and operation, but it would not encourage wasteful use of energy or have a substantial effect on energy resources.

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS

		Not Applicable	Discussed
1.	Discuss any variances, special authorizations, or changes proposed to the City Planning Code or Zoning Map, if applicable.	X	—
2.	Discuss any conflicts with any adopted environmental plans and goals of the City or Region, if applicable.	—	X

Zoning. The project site comprises all of Assessor's block 4213; this block is zoned "P" for public uses.[6] Building heights at the site are limited to 40 feet. Properties within the project vicinity are zoned for residential, commercial, and public uses. Facilities associated with the San Francisco General Hospital are located north of 23rd Street, and this area is also zoned "P" for public uses.

South of 23rd Street, properties west of Utah Street and east of San Bruno Avenue (except those bordering 24th Street) are within RH-2 (House, Two-Family) zoning districts, generally allowing for two-family residential uses (i.e., two dwellings per lot and up to one unit per 1,500 square feet). Properties east of San Bruno Avenue and bordering 24th Street are within an RM-1 (Mixed Residential, Low Density) zoning district, which allows for mixed, low-density residential uses (one dwelling unit per 800 square feet of lot area). To the south and southwest of the site, properties are within the 24th-Mission Neighborhood Commercial District, allowing a mix of residential and commercial uses. The building height limit on all properties surrounding the site is 40 feet except for the San Francisco General Hospital facilities where the height limit is 105 feet.

San Francisco Master Plan. The EIR will describe applicable general and regional plans and discuss any inconsistencies between the proposed project and these plans.

B. ENVIRONMENTAL EFFECTS

1. **Land Use — Could the project:**	Yes	No	Discussed
a. Disrupt or divide the physical arrangement of an establishment community?	__	X	X
b. Have any substantial impact upon the existing character of the vicinity?	__	X	X

The project site is currently used to maintain MUNI buses and related equipment. Surrounding areas contain a mix of land uses including hospital-related facilities to the north, residential uses to the northwest and east, a parking lot for the Gladstone Foundation Laboratories to the southwest, and neighborhood commercial uses (e.g., cafe, cleaners, church, etc.) to the south. Neighborhood commercial uses are generally on the ground floor with residential uses located above.

The proposed project would consist of demolition of an existing public facility service use and construction of a public facility parking use. Project compatibility with adjacent residential and commercial uses would depend on design features that are incorporated into the facility. Land use impacts will be addressed in the EIR.

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[6]City and County of San Francisco, 1990. Zoning Maps, City and County of San Francisco Municipal Code. September 30.

2. Visual Quality — Could the project:	Yes	No	Discussed
a. Have a substantial, demonstrable negative aesthetic effect?	__	X	X
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	__	X	X
c. Generate obtrusive light or glare substantially impacting other properties?	__	X	X

Currently, there is a one-to two-story stucco clad building occupying about two-thirds of the project site, with the stucco facade extending along the entire lengths of the Utah Street and 23rd Street frontages, along about one-third of the San Bruno Avenue frontage, and along about one-quarter of the 24th Street frontage. The remainder of the site frontage on San Bruno Avenue and 24th Street is lined by a chain-link fence around a paved parking and storage area. There are no street trees or other landscaping located along the perimeter of the project site. The project site is located in a mixed-use neighborhood which has residential, retail and service commercial, public facilities and light industrial uses.

Removal of existing structures on the site and construction of a multi-level parking garage would change the visual character of the neighborhood. The EIR will include a visual analysis of the proposed project which examines the scale, massing and detailing of the parking garage, its visual relationship to surrounding structures, proposed landscaping plans, night-lighting and glare from headlights in the structure.

The proposed parking structure would be less than 40 feet in height, as measured by the City Planning Code, and therefore would not be subject to the requirements of Section 295 of the City Planning Code (Sunlight Ordinance, Proposition K). Therefore, shadow analysis will not be included in the EIR.

3. Population — Could the project:	Yes	No	Discussed
a. Induce substantial growth or concentration of population?	__	X	X
b. Displace a large number of people (involving either housing or employment)?	__	X	X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	__	X	X

There would be no effect on population growth associated with the project. The proposed project would result in about six new jobs associated with operation and maintenance of the new facility.[7] The existing MUNI operations would be relocated prior to demolition of the facilities, and the proposed project would therefore not displace any jobs. Similarly, there would be no effect on housing demand or housing supply in San Francisco.

Population and growth-inducing effects associated with the project were determined to require no further analysis and will not be included in the EIR.

4. **Transportation/Circulation — Could the project:**	Yes	No	Discussed
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	X	—	X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	X	—	X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	—	X	X
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	—	X	X

Transportation setting, impacts and mitigation measures will be discussed in the EIR. The proposed project would be expected to result in changes in the travel patterns and travel mode distributions of hospital staff, patients and visitors. The parking structure would also result in changes to traffic patterns along Potrero Avenue at 23rd and 24th streets as well as at the garage access points. The EIR will include an analysis of the effects of the proposed parking structure on parking demand and travel mode distribution at the hospital, based on the size of the parking facility at the two construction phases, the use of low and high parking rate structures, and implementation of low and moderate transportation system management (TSM) programs. The EIR will also examine the changes to travel patterns on local streets that would occur with the project, including potential effects on MUNI, traffic and parking. Possible mitigation measures will be evaluated and recommended.

[7] Personal communication with Kevin Hagerty, Assistant Director, San Francisco Parking Authority, April 15, 1992.

Project construction impacts will be evaluated in the EIR to determine the short-term effects on parking and localized transportation effects as well as to identify the temporary disruption associated with construction employee and truck traffic. The EIR will provide an analysis of cumulative transportation impacts associated with background growth in the City, construction of the hospital's mental health skilled nursing facility, and the proposed Gladstone Foundation medical research facility.

5. **Noise — Could the project:**	Yes	No	Discussed
a. Increase substantially the ambient noise levels for adjoining areas?	X	__	X
b. Violate Title 24 Noise Insulation Standards, if applicable?	__	N/A	X
c. Be substantially impacted by existing noise levels?	__	X	X

Demolition and construction activities would temporarily increase noise in the site vicinity. Project construction noise and its possible effects on sensitive receptors will be addressed in the EIR.

During operation of the proposed parking garage, there is potential for noise impacts to adjacent residents associated with vehicle operation within the facility and from the redistribution of traffic on streets adjacent to the project site. These impacts will be analyzed in the EIR.

The proposed parking use is not a noise-sensitive use and would not be subject to either the Title 24 noise insulation standards or the land use compatibility guidelines outlined in the Environmental Protection Element. Therefore, no further analysis of project consistency with these standards and guidelines is required.

6. **Air Quality/Climate — Could the project:**	Yes	No	Discussed
a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	X	__	X
b. Expose sensitive receptors to substantial pollutant concentrations?	X	__	X
c. Permeate its vicinity with objectionable odors?	__	X	X
d. Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	__	X	X

The project site is located in the San Francisco Bay Area Air Basin, which, due to its failure to achieve consistently some air quality standards, has been designated a non-attainment area for ozone, carbon monoxide, and suspended particulates. Ambient air quality measurements conducted by the Bay Area Air Quality Management District at its Potrero Hill, San Francisco station, indicate that air pollution levels are relatively low in the project area compared to applicable air quality standards.

Construction activities would temporarily affect local air quality. Demolition, site clearance and grading activities would result in temporary increases in particulate emissions. Construction equipment, trucks and employees vehicles would result in temporary increases in vehicular emissions, including nitrogen oxides, carbon monoxide, hydrocarbons, and suspended particulates.

Operation of the proposed parking garage would result in changes in local traffic patterns, with associated changes in localized air quality emissions, particularly carbon monoxide. In addition, due to the redistribution of traffic patterns, the proposed project may result in changes to regional air quality emissions.

The EIR will describe the existing air quality conditions in the project vicinity in terms of current air quality standards and regional air quality planning guidelines. Construction-related air quality impacts will be evaluated, including particulate emissions and equipment emissions. The EIR will analyze long-term air quality impacts associated with implementation of the project by providing estimated localized carbon monoxide emissions at critical intersections near the site and comparing existing, project-level, and cumulative emission conditions. The EIR will also estimate long-term changes in regional air quality conditions.

The proposed parking garage would not have the potential to generate odors other than those associated with vehicular traffic. The parking garage would have an open-air design such that there would be no accumulation of vehicular emission odors. The EIR will not include any further discussion of odors.

The height of the proposed parking structure would be similar to the existing MUNI facility and would not be expected to result in changes in wind patterns. No further wind analysis will be presented in the EIR.

7. **Utilities/Public Services — Could the project:**	Yes	No	Discussed
a. Breach published national, state or local standards relating to solid waste or litter control?	__	X	__
b. Extend a sewer trunk line with capacity to serve new development?	__	X	X
c. Substantially increase demand for schools, recreation or other public facilities?	__	X	X
d. Require major expansion of power, water, or communications facilities?	__	X	X

The proposed parking facility would require sewer service for the staff toilet room, which could be accommodated by the existing sewer lines in the street bordering the site. There would be no need to increase the capacity of the existing sewers.

The proposed project would generate about six new jobs associated with operation and maintenance of the parking facility. These jobs would likely be filled by the existing population within San Francisco, and there would be no increase in demand for schools, recreation or other public facilities. There would be no effect on the demand for schools, recreation or other public facilities.

The proposed project would not require mechanical ventilation, and electricity would be required mainly for lighting purposes. The project area has 12 kilovolts distributed over the area, which is adequate to accommodate the proposed project.[8] Similarly, water and communication demands for the proposed project would be comparable to the existing levels used by the MUNI facility, and no expansion would be necessary.

Based on the above discussion, no further study of public services and utilities would be necessary, and these issues will not be addressed in the EIR.

8. **Biology — Could the project:**	Yes	No	Discussed
a. Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	__	X	__
b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	__	X	__
c. Require removal of substantial numbers of mature, scenic trees?	__	X	X

The site is currently entirely developed with structures or pavement. There are no trees or other plants on the entire block. Demolition of the existing facilities and construction of the proposed parking facility would not affect any plants or wildlife habitat. Therefore, biological effects were determined to require no further analysis and will not be included in the EIR.

[8] Telephone communication with Rocco Colicchia, Industrial Power Engineer, Pacific Gas & Electric, April 3, 1992

9. Geology/Topography — Could the project:	Yes	No	Discussed
a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction).	__	X	X
b. Change substantially the topography or any unique geologic or physical features of the site?	__	X	X

The elevation at the project site ranges from approximately 85 feet (SFD[9]) on the northeast corner of the site to approximately 60 feet (SFD) on the southwest corner of the site. The northern portion of the site is currently excavated about 1- to 1½-story below grade, while the southern portion of the site is paved at grade. Published data indicate that the site is underlain by quaternary alluvium less than 100 feet thick.[10] In 1989, soil borings were drilled on the site, and groundwater was encountered at a depth of approximately 25 feet.

Excavation is not anticipated during construction of the parking facility, with the exception of a few isolated locations such as the elevator shaft or foundation area. Dewatering is not anticipated to be required, but further groundwater information will be provided in the EIR with regard to hazardous materials remediation of groundwater resources.

The project area is located in a seismically active region, with the closest active faults being the San Andreas Fault located about nine miles southwest of downtown San Francisco, and the Hayward and Calaveras faults located about 15 and 30 miles east of the site. The project area would be expected to experience strong groundshaking during a major earthquake, and the proposed structure would be required to meet current seismic engineering standards of the San Francisco Building Code.

The project site has not been identified as being located in an area subject to the following geologic hazards: liquefaction, landslide, subsidence, and tsunami inundation.[11]

The project would not have a substantial effect on geology, topography or hydrology, and these topics will not be discussed in the EIR. Due to the identified groundwater contamination, groundwater hydrology will be addressed in the EIR, as discussed under the Hazards Section, below.

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[9] SFD stands for San Francisco Datum where 0 = 8.6 feet above mean sea level.

[10] Borcherdt, Roger, Gibbs, James F. and Lajoie, Kenneth, 1975. Maps Showing Maximum Earthquake Intensity Predicted in the Southern San Francisco Bay Region, California for Large Earthquakes on the San Andreas and Hayward Faults. Miscellaneous Field Studies Map 709, U. S. Geological Survey.

[11] URS/John A. Blume & Associates, Engineers, 1974. *San Francisco Seismic Safety Investigation.* Prepared for the Department of City Planning, City of San Francisco.

10. Water — Could the project:	Yes	No	Discussed
a. Substantially degrade water quality, or contaminate a public water supply?	__	X	X
b. Substantially degrade or deplete ground water resources, or interfere substantially with groundwater recharge?	__	X	X
c. Cause substantial flooding, erosion or siltation?	__	X	X

Demolition of the existing facility and construction of the proposed parking garage would not result in changes to water quality or surface flow conditions. The site is currently entirely covered with impervious surfaces, and the proposed parking structure would replace the existing structures with an equivalent area of impervious surfaces. Therefore, there would be no change in the volume of surface flow.

Drainage facilities would be incorporated into the project design to prevent ponding and to ensure that flows are directed to the City's combined sanitary and storm drainage system, as required by City codes. There would be no permit requirements for surface discharge into the combined sewer system.[12] During construction, the excavation and earthmoving activities would be restricted to the dry season (April to October) to minimize the potential for sediment from entering the sewer system.

Based on the above discussion, the project would not degrade water quality, contaminate a public water supply, or cause substantial flooding, erosion or siltation. Therefore, no further discussion of surface water hydrology and water quality will be included in the EIR. Groundwater hydrology will be discussed in the EIR as it relates to hazardous materials remediation.

11. Energy/Natural Resources — Could the project:	Yes	No	Discussed
a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	__	X	X
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	__	X	X

[12] Telephone communication with Tommy Lee, Section Engineer, Pretreatment Enforcement, San Francisco Department of Public Works, April 1992.

During demolition of the existing building and construction of the proposed parking garage, energy in the forms of electricity and fossil fuels (diesel and gasoline) would be consumed. Heavy equipment operation and delivery and haul trucks would require diesel fuels, while construction worker vehicles to and from the site would consume gasoline. Tools, lights and temporary construction offices would consume electricity. There would be off-site energy consumption required for the fabrication of building materials. For construction of the project, fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 230 billion British thermal units (Btu) of gasoline, diesel fuel, natural gas, and electricity.[13] Distributed over the estimated 50-year life of the project, this would be about 4.6 billion Btu per year for the project.

The operational energy requirements for the proposed parking garage were estimated by Zeiger Engineering.[14] Energy requirements would consist entirely of electrical usage for lighting and elevators. The proposed interior lighting fixtures would be 150-watt high pressure sodium lamps, with approximately two fixtures per 1,800 square feet. The exterior lighting would consist of two post-top 400-watt high pressure sodium lamps at the ground level and six poles with 250-watt lamps on the roof. It is assumed that the covered parking lighting would operate 24 hours per day year round, while the exterior lighting for the rooftop and surface lot would be operated by photocell control, operating 9 hours per day in the summer and 12 hours per day in the winter. There would be two elevators in the parking structure each with a 25-horsepower motor; the elevator is assumed to operate four hours per day. There would be no mechanical ventilation equipment and no heating required for the structure.

The connected lighting kilowatt load would be approximately 64 kilowatts (57,372 watts for interior lighting and 6,800 watts for exterior lighting); the total connected elevator load would be 50,000 watts. Thus, the total connected kilowatt load for the proposed project would be approximately 114 kilowatts. The estimated average kilowatt hours is approximately 49,144 kilowatt-hours per month during the summer and 49,756 kilowatt-hours per month in the winter. Based on an estimated square footage of 300,000 square feet for the parking structure, the kilowatt-hours would be about 0.164 and 0.166 kilowatt-hour per month per square foot interior floor space during summer and winter, respectively. Figure 3 presents the anticipated daily and annual electric load distribution curves.

The Pacific Gas and Electric (PG & E) Company provides electricity for the City of San Francisco from nuclear power, oil, gas, hydroelectric and geothermal facilities, wind, cogeneration and solid waste sources. There have been no capacity problems in the project area, and there is ample service in the area to provide any additional power needs required by the proposed project.[15]

There would be no fossil fuel demand during operation of the project, since there would be no heating provided in the structure. Additional energy in the form of fossil fuels would be consumed by users of the

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[13] Hannon, B. et. al., 1978. "Energy and Labor in the Construction Sector," *Science* 202:837-847.

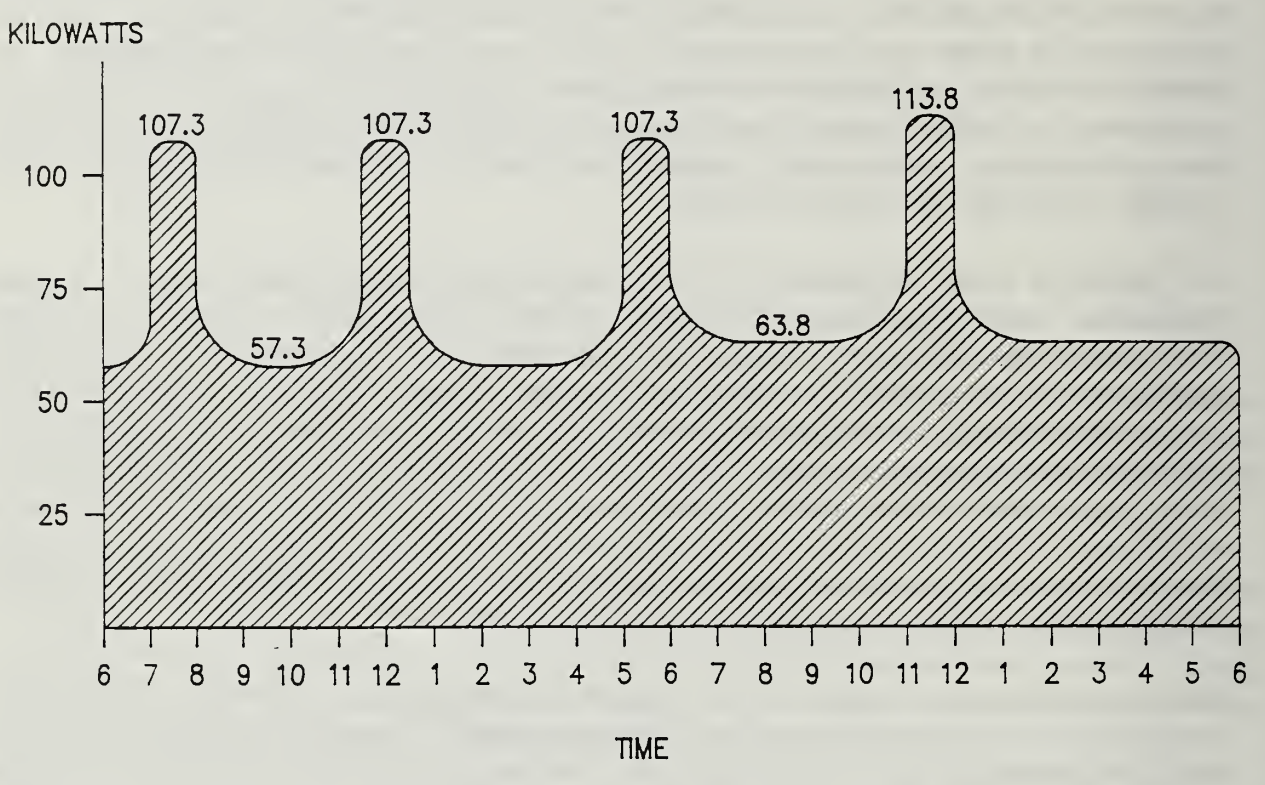
[14] Letters from Oscar T. Louie, P.E., Senior Electrical Engineer, Zeiger Engineering, to Don Tiefenbrunn, Fong & Chan Architects, dated May 13, 1992 and July 1, 1992 regarding KWH usage, and telephone communication with Oscar Louie dated June 30, 1992.

[15] Telephone communication with Rocco Colicchia, Industrial Power Engineer, PG & E, April, 1992.

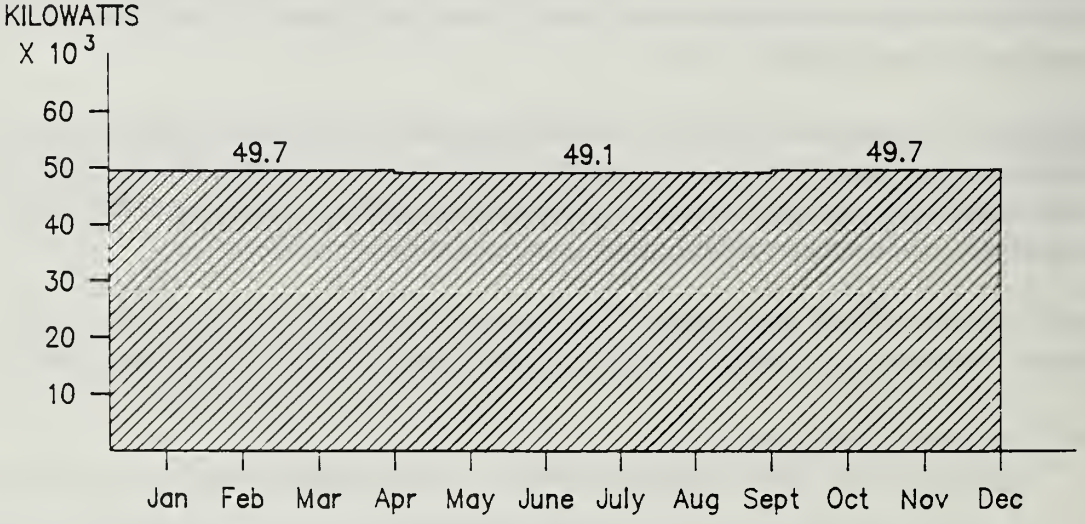
ANTICIPATED ELECTRICAL LOAD CURVES

FIGURE 3

San Francisco General Hospital
Parking Garage Project



ANTICIPATED DAILY ELECTRIC LOAD DISTRIBUTION CURVE



ANTICIPATED ANNUAL ELECTRIC LOAD DISTRIBUTION CURVE

parking garage, entering and exiting the facility. However, it is anticipated that there would be no additionalenergy consumed over the current level of consumption, since the facility would be accommodating existing traffic, and less time (and fuel) would be needed to find a parking space. No natural gas would be required.

Measures to minimize energy consumption include the use of energy efficient lighting fixtures as well as an open structure design to maximize use of natural lighting. In addition, the structure would use natural convection for ventilation rather than any mechanical, energy-consuming equipment.

Based on the above discussion, the project would not encourage activities which result in the use of large amounts of energy nor would it have a substantial effect on the potential use of a natural resource. Therefore, no further discussion of energy or natural resources will be included in the EIR.

12. **Hazards — Could the project:**	Yes	No	Discussed
a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	X	—	X
b. Interfere with emergency response plans or emergency evacuation plans?	—	X	X
c. Create a potentially substantial fire hazard?	—	X	X

A petroleum leak investigation of the project site was conducted in 1989 and indicated that there is currently contamination of soil and groundwater on the property associated with the underground tanks formerly located on the site.[16] Further investigation of the site and design of remediation methods are currently underway.

The EIR will describe the nature and extent of contamination at the site, the status of remediation efforts, and the relationship of the proposed project to the remediation program. The EIR will also discuss any potential of encountering hazardous materials during demolition of existing facilities or during project construction.

The operation of the proposed parking garage would not involve the use, production or disposal of any harmful materials. Emergency response, and evacuation plans would be prepared for the proposed parking garage as required by applicable state and local regulations. In addition, the parking garage would be constructed in compliance with current fire codes to minimize any fire hazards and would result in a more fire-safe structure than the existing facility. These topics will not require further discussion in the EIR.

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[16] Harding Lawson Associates, 1989. *Preliminary Petroleum Leak Investigation, MUNI Maintenance Facility, 24th and Utah Street Garage, San Francisco, California.* Prepared for City and County of San Francisco, Department of PUblic Works, Bureau of Architecture.

13. Cultural Resources — Could the project:	Yes	No	Discussed
a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	X	—	X
b. Conflict with established recreational, educational, religious or scientific uses of the area?	—	X	—
c. Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code?	—	X	—

Cultural Resources. Cultural resources investigations for the proposed project, consisting primarily of archival review, were undertaken by historian Jan M. Hupman and archaeologist David Chavez in 1992.[17] These investigations are summarized below and the full report is available at the San Francisco Department of City Planning.

Archaeological evidence suggests that the northern San Francisco Peninsula was intensively used during prehistoric times. Marshlands in the general vicinity of the project area were situated in the Islais Creek and Mission Valley Creek regions; these marshlands have virtually disappeared under man-made fill as a result of nineteenth- and twentieth-century human activities.

Archaeological records make no reference to known or potential resources on the project site. However, the project site and immediate environs appear to have possessed many of the prehistoric environmental criteria conducive to cultural activity and habitation. The site would have been located on high ground about 0.3 mile north of the DuVrees Creek (later named Islais Creek) marshlands, close to the salt marshes and tidal flats with availability of potable water and food resources.

Surface inspections of the site provided no archaeological information, as the site is entirely covered by buildings and pavement and there is no exposed terrain. Subsurface information provided in geotechnical borings[18] indicated no evidence of prehistoric cultural deposits.

No documented or suspected structures, features or cultural deposits associated with the Spanish, Mexican or Early American periods are identified for the project site. During the Spanish period (1776 to 1822), Mission Dolores was situated about 1-½ miles northwest of the project site, and the project area was likely

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[17] Hupman, Jan M. and Chavez, David, 1992. *Cultural Resources Investigations for the San Francisco General Hospital Parking Garage EIR, San Francisco, California.*

[18] Harding-Lawson Associates, 1989. Preliminary Petroleum Leak Investigation, MUNI Maintenance Facility, 24th and Utah Street Garage, San Francisco, California. Prepared for City and County of San Francisco, Department of Public Works, Bureau of ARchitecture.

traversed by herds of cattle, sheep and horses or planted with crops such as corn and wheat. During the Mexican period (1822 to 1848), the project area was in the southwest portion of Rancho Potrero Nuevo (later to be known as the Potrero District) which was used solely for grazing cattle. During the Early American period (1848 to 1865), the Potrero District remained largely undeveloped, including the project site, according to the 1859 U.S. Coast Survey Map.

The City Building period (1865 to 1900) was characterized by farming and dairy activities in the general area of the site, with no specific use identified for the project site. The project site was approximately one mile west of the waterfront, in a section of the Potrero District where truck-farming and dairy farming were the principal activities, and historical maps from 1861 to 1889 indicate no development on the project site. Development, however, did occur in the vicinity of the project site during this period, including the Magdelene Asylum (built in 1864 on Potrero Avenue between 20th and 22nd streets), and the San Francisco County Hospital (built in 1874 on the block directly north of the project site). By 1892, a historical map of the eastern portion of San Francisco indicates at least one building in the northwest corner of the project site, which appears to have been a residential structure.

Historical records of the property from the twentieth-century indicate that by the turn of the century, two structures and associated outbuildings existed in the northwest corner of the block. The Market Street Railway operated a car barn in the southwest half of the site, evidently used for the storage of old cars, and the remainder of the property was "full of old cars, rails and cobble stones."[19] By 1914, the entire project site was being utilized by the United Railroads of San Francisco, which later came under the control of the San Francisco Municipal Railway (MUNI). These facilities and structure are essentially the same as those currently on the site, although portions of the structure was rebuilt after a fire in 1952. Land use on the property has essentially remained unchanged since the start of the twentieth-century, and there is nothing in the historical record that suggests that filling or other disruptive activities occurred at the site that would cover historical features or artifacts.

It is concluded that there is little potential for encountering prehistoric sites, eighteenth or nineteenth century subsurface, historic archaeological deposits or structural remains during construction of the proposed project. However, there remains a slight potential that prehistoric archaeological deposits may exist on the project site. In addition, it is possible that the existing pavement and possibly buildings on the property have obscured some industrial artifacts and tracks associated with earlier period car storage and maintenance. Artifacts and features may be revealed when the existing building and pavement is removed.

Measures (see Section D, below) have been included in the proposed project that would mitigate potential impacts on cultural resources that might be encountered during construction of the proposed garage.

Historical Architecture. The architectural characteristics of the existing structure were evaluated by Sally Woodbridge, architectural historian, prior to the proposed demolition.[20] This investigation is summarized below and the full report is available at the San Francisco Department of City Planning.

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[19] Sanborn Map, 1900. Bancroft Library, University of California, Berkeley.

[20] Woodbridge, Sally B., 1991. *Report on the Architectural Significance of the PUC/MUNI 24th and Utah Streets Property.*

The existing building was constructed about 1910 as the Market Street Railway's motor bus garage. On March 24, 1952, the building was badly damaged by a fire, and the damaged part of the building was rebuilt and continued for use for bus storage. The portion of the building dating from about 1910 was built over 50 years ago, in what, according to National Register criteria, is considered the historic period. The central part of the building on the interior of the block was built after the 1952 fire and does not meet the National Register criterion of 50 years of age for historic structures. The rest of the site is an open, fenced, asphalt-covered yard.

The existing building consists of a one-and two-story section on a raised basement along Utah Street and a one-story section on 23rd Street. The older sections of the building are of unreinforced brick-walled construction, plastered on the exterior, with a wooden-truss roof structure covered with metal. Stylistically, the west section of the building was built in a Renaissance Revival style with round and segmental arches and pronounced moldings defining the windows of the two-story section. The north section on 23rd Street was built in the Mission Revival style signified by the stepped and curved parapet that defines the street elevations of each of the three garages, which are connected by walls. The openings, some of which have been partially or completely blocked, have segmental heads.

The building is a representative example of early 20th-century industrial vernacular architecture, although the modern addition has destroyed its architectural integrity. The San Francisco Planning Department's 1976 Architectural Survey Inventory describes the existing building as a nineteenth-century ornamental structure of "low architectural quality and compromised integrity."[21] In May 4, 1988, the San Francisco Landmarks Preservation Advisory Board evaluated the structure and did not find that the building warranted protection as an historic structure pursuant to Section 101.1 of the City Planning Code.[22]

Based on the information presented above and on the referenced reports on file with the Department of City Planning, further analysis of cultural resources has been deemed unnecessary and will not be included in the EIR.

C. OTHER	Yes	No	Discussed
Require approval and/or permits from City Departments other than Department of City Planning or Bureau of Building Inspection, or from regional, state or federal agencies?	X	—	X

The proposed project would require approval of the Arts Commission for a public structure.

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[21] San Francisco Planning Department, 1976. Architectural Survey Inventory.

[22] Malone, Jonathan H., 1988. Letter to Mr. Douglas G. Wright, Director, Planning and Development Public Utilities Commission regarding PUC/MUNI 24th and Utah Streets Property, Lot 1 in Assessor's Block 4213 dated May 10, 1988.

D. MITIGATION MEASURES	Yes	No	n/a	Discussed
1. If any significant effects have been identified, are there ways to mitigate them?	X	__	__	X
2. Are all mitigation measures identified above included in the project?	X	__	__	__

Cultural Resources

- Should evidence of archaeological resources of potential significance be found during ground disturbance, the project sponsor would immediately notify the Environmental Review Officer (ERO) and would suspend any excavation which the ERO determines could damage such archaeological resources. Excavation or construction activities which might damage discovered cultural resources would be suspended for a total maximum of four weeks over the course of construction.

  After notifying the ERO, the project sponsor would select an archaeologist to assist the Office of Environmental Review in determining the significance of the find. The archaeologist would prepare a draft report containing an assessment of the potential significance of the find and recommendations for what measures should be implemented to minimize potential effects on archaeological resources. Based on this report, the ERO would recommend specific additional mitigation measures to be implemented by the project sponsor.

  Mitigation measures might include a site security program, additional on-site investigations by the archaeologist, and/or documentation, preservation, and recovery of cultural materials. Finally, the archaeologist would prepare a draft report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted.

  Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the ERO for review. Following approval by the ERO, copies of the final report would be sent to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. The Office of Environmental Review shall receive three copies of the final archaeological report.

Geology/Topography

- A geotechnical investigation will be completed by a California licensed geotechnical engineer prior to the start of construction, and the project sponsor and contractor will implement the recommendations of the geotechnical report regarding excavation and construction for the project.

Water Quality

- During construction, excavation and earthmoving activities will be restricted to the dry season, from April to October.

Energy

- The project will be designed to include energy-efficient lighting.

E. ALTERNATIVES

The EIR will analyze the following five alternatives to the proposed project, as required by CEQA, Section 15126(d), which could "feasibly attain the basic objectives of the project." The environmental effects of the alternatives will be evaluated in comparative terms relative to the proposed project.

(1) **Parking Structure plus Residential Use Alternative**. Under the 24th-Mission Neighborhood Commercial District controls, the 80,000 square-foot project site could accommodate approximately 133 dwelling units, at 1 unit per 600 square feet. This alternative would therefore consist of 133 dwelling units plus a parking structure.

(2) **Parking Structure plus Commercial Use**. This alternative would combine ground floor commercial uses with the parking structure.

(3) **Off-site Alternative**. As required by CEQA, this alternative would examine placing the parking structure at another location, possibly in the emergency room parking lot.

(4) **Reduced-scale Parking Garage Alternative**. This alternative consists of building only an 800-space parking garage, which would be the same as limiting the proposed project to only the first phase of construction.

(5) **No Project Alternative**. This alternative would consist of leaving the existing facilities as is. The MUNI operations may relocate regardless of the proposed project, and the site could become available for other uses.

F. MANDATORY FINDINGS OF SIGNIFICANCE	Yes	No	Discussed
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	__	X	__

2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	X	—	—
3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	X	—	—
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	—	X	—

G. **On the Basis of this Initial Study**

___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

___ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, number ____, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

X I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Paul A. Deutsch Hay

BARBARA W. SAHM
Environmental Review Officer

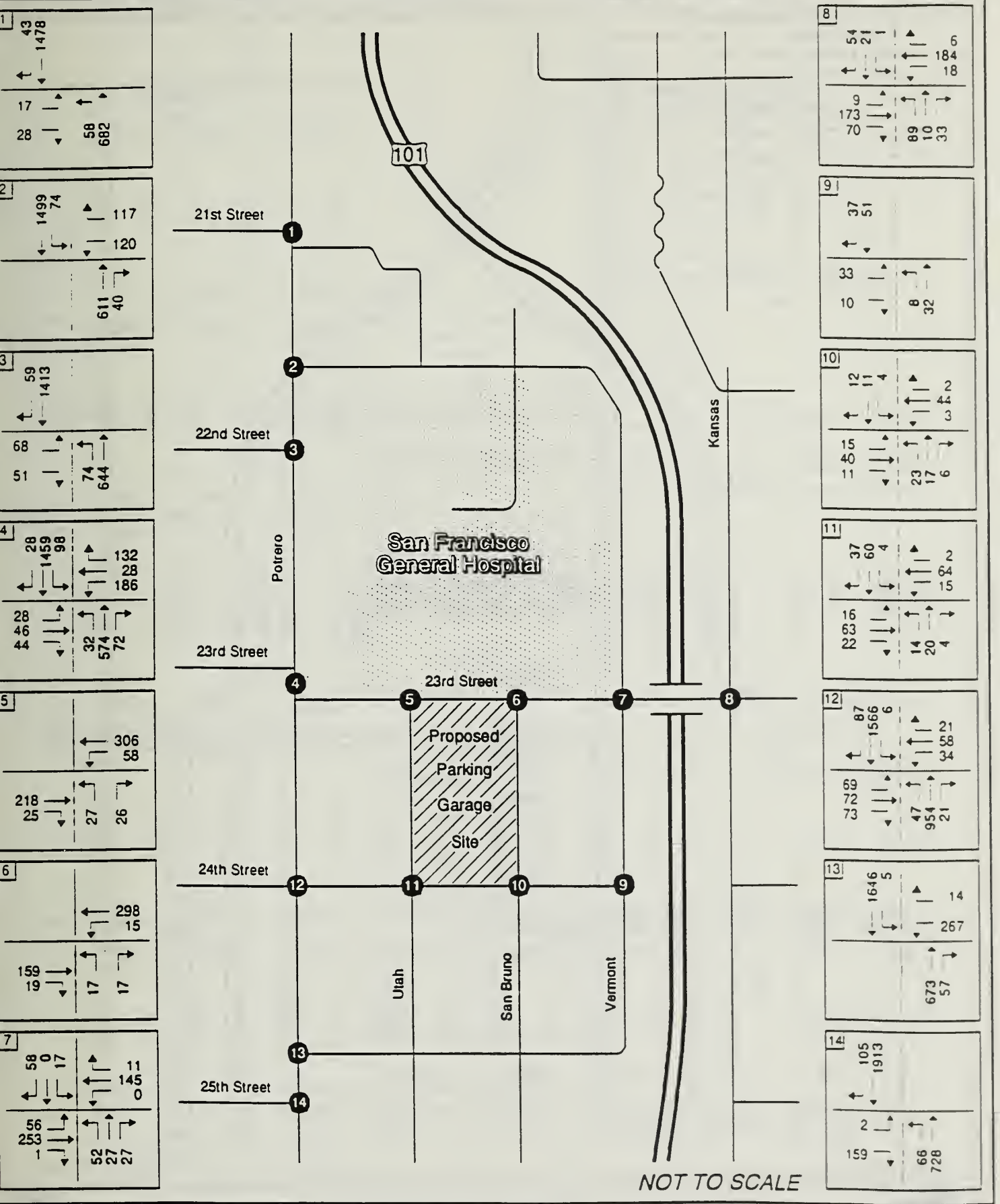
for

LU BLAZEJ
Director of Planning

Date: July 13, 1992

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE	SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
"A"	Uncongested operations, all queues clear in a single-signal cycle. (V/C= 0.00 - 0.60)	Little or no delay.
"B"	Uncongested operations, all queues clear a single cycle. (V/C = 0.61 - 0.70)	Short traffic delays
"C"	Light congestion, occasional backups on critical approaches. (V/C = 0.71 -0.80)	Average traffic delay.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. (V/C = 0.81 - 0.90)	Long traffic delays.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). (V/C = 0.91 - 1.00)	Very long traffic delays, failure, extreme congestion.
"F"	Total breakdown, stop-and-go operation. (V/C > 1.00)	Intersection blocked by external causes.



Peak P.M. Traffic Volumes

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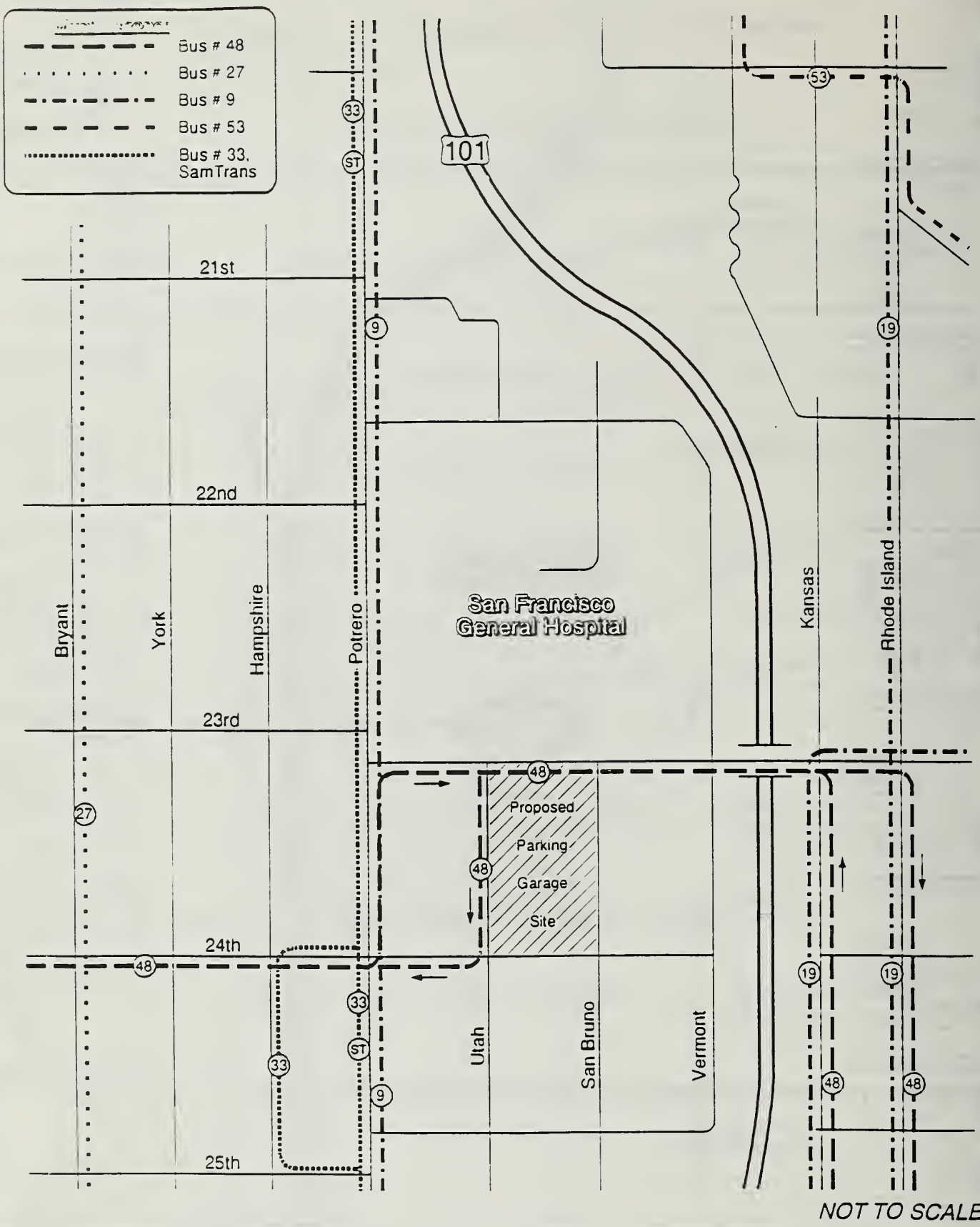
figure 2



Muni Transit Map

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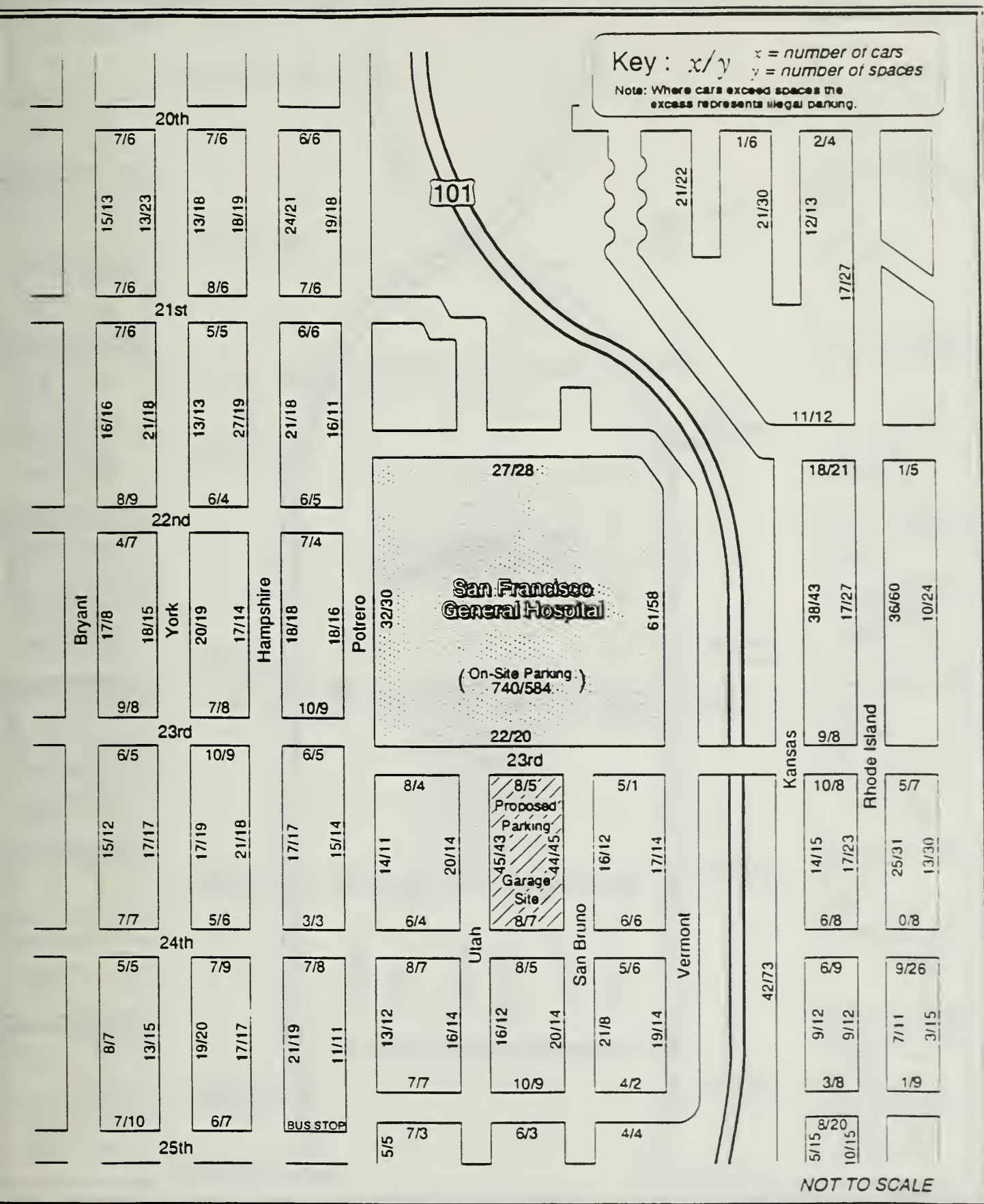
figure 3



Existing Parking Occupancy

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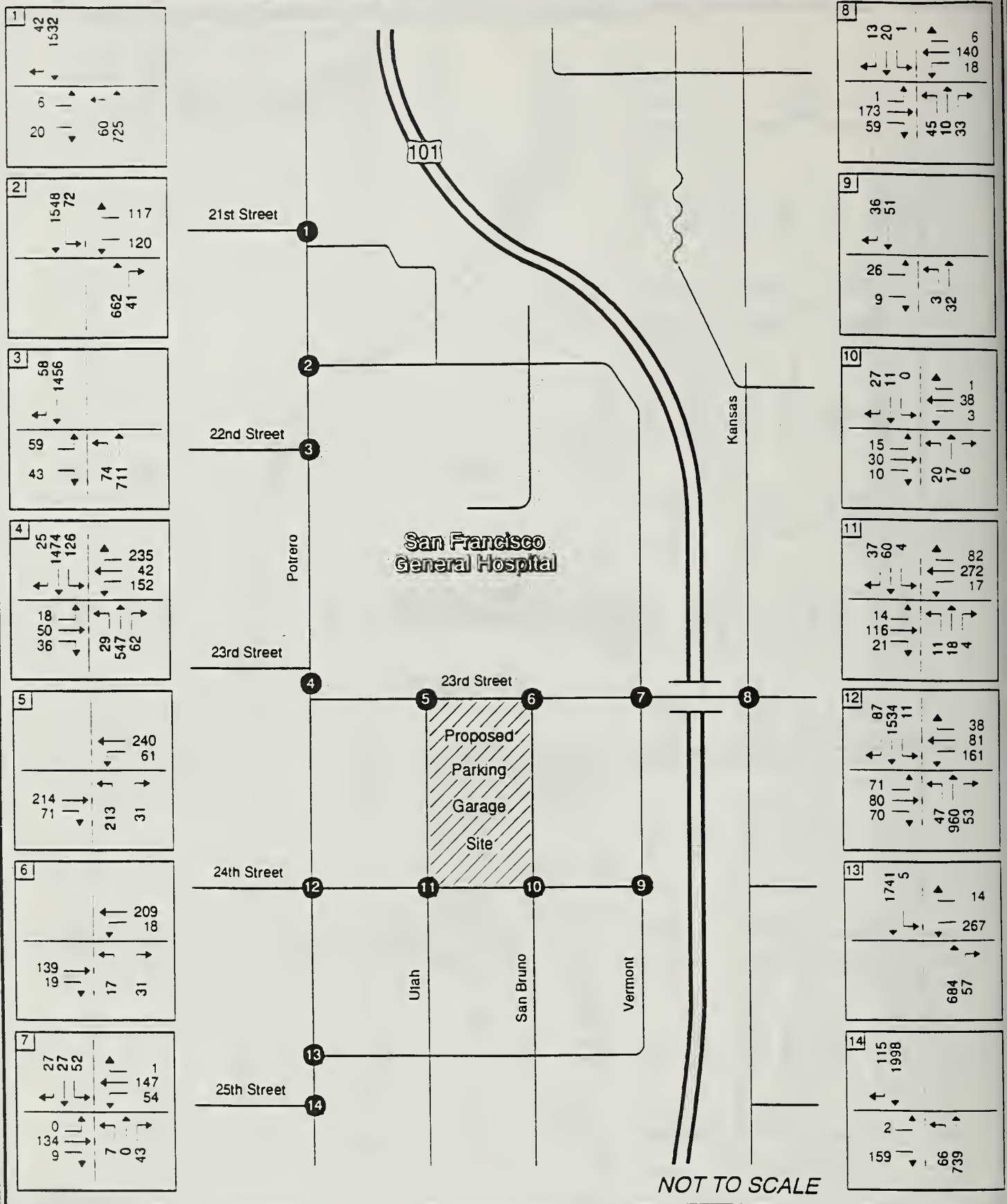
figure 4



Existing + Project
800 Space Garage With RPP, Low TSM, Low Parking Rates

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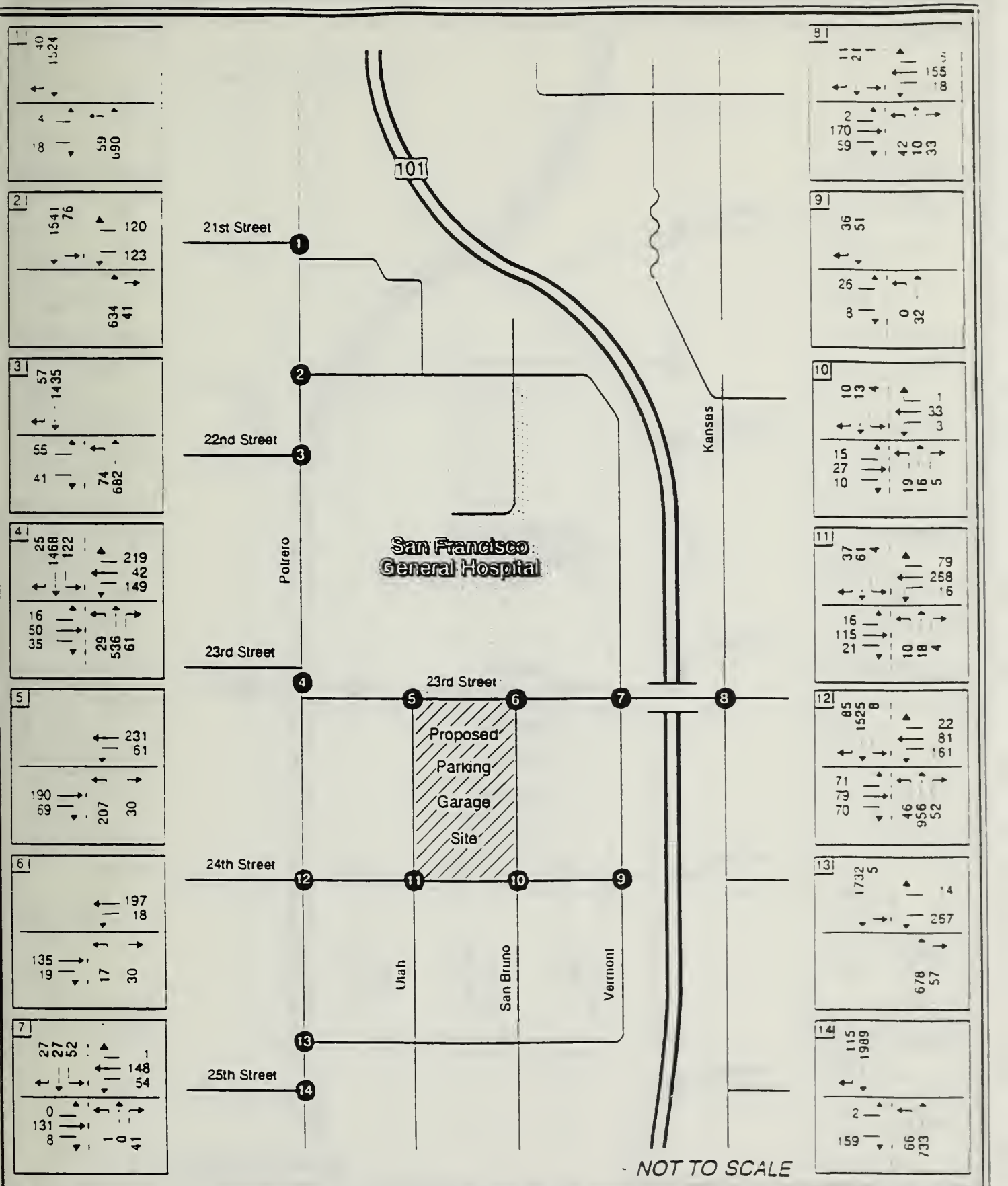
figure 5



Existing + Project
800 Space Garage With RPP
High TSM, Low Parking Rates / Low TSM, High Parking Rates

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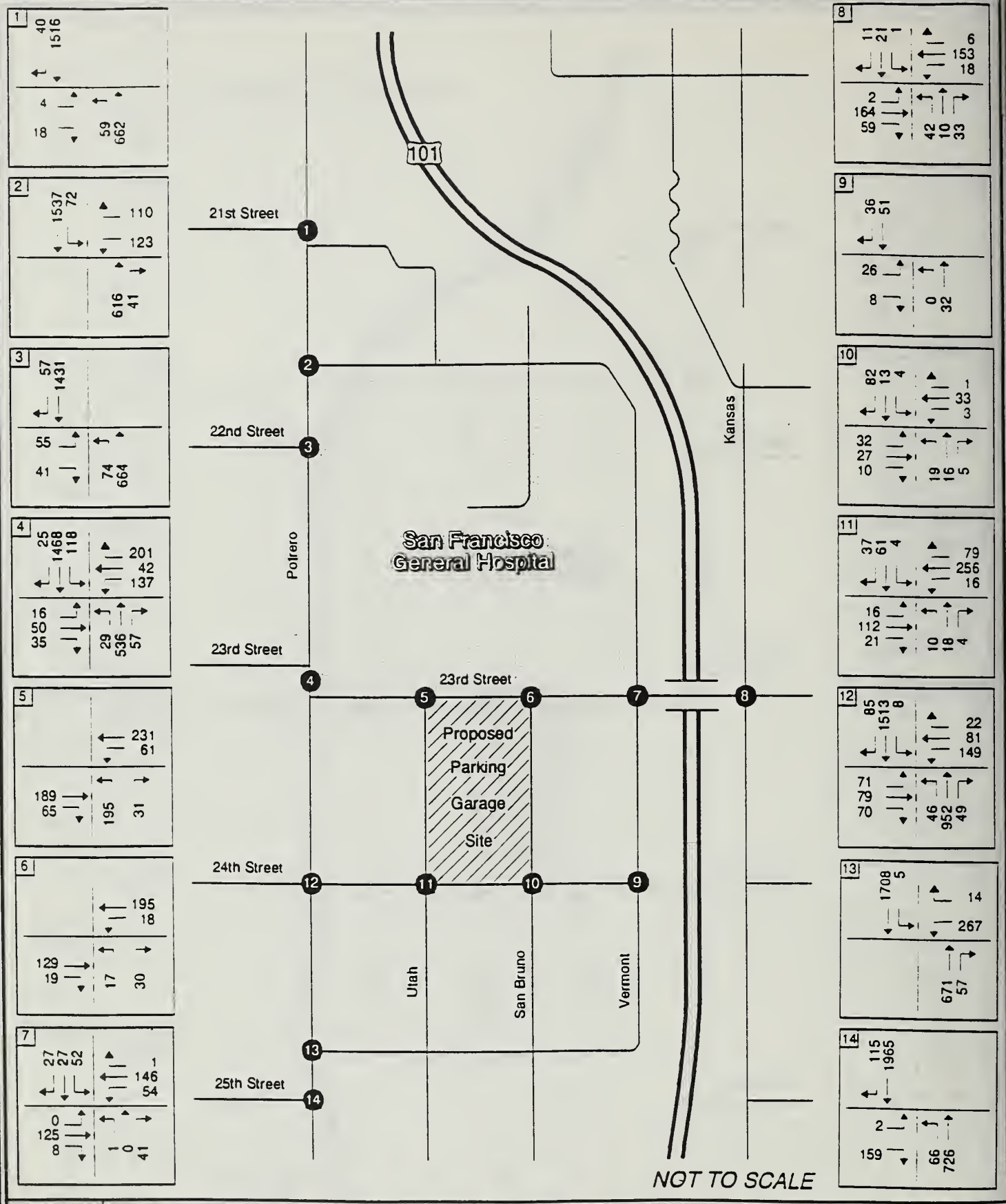
figure 6



Existing + Project
800 Space Garage With RPP, High TSM, High Parking Rates

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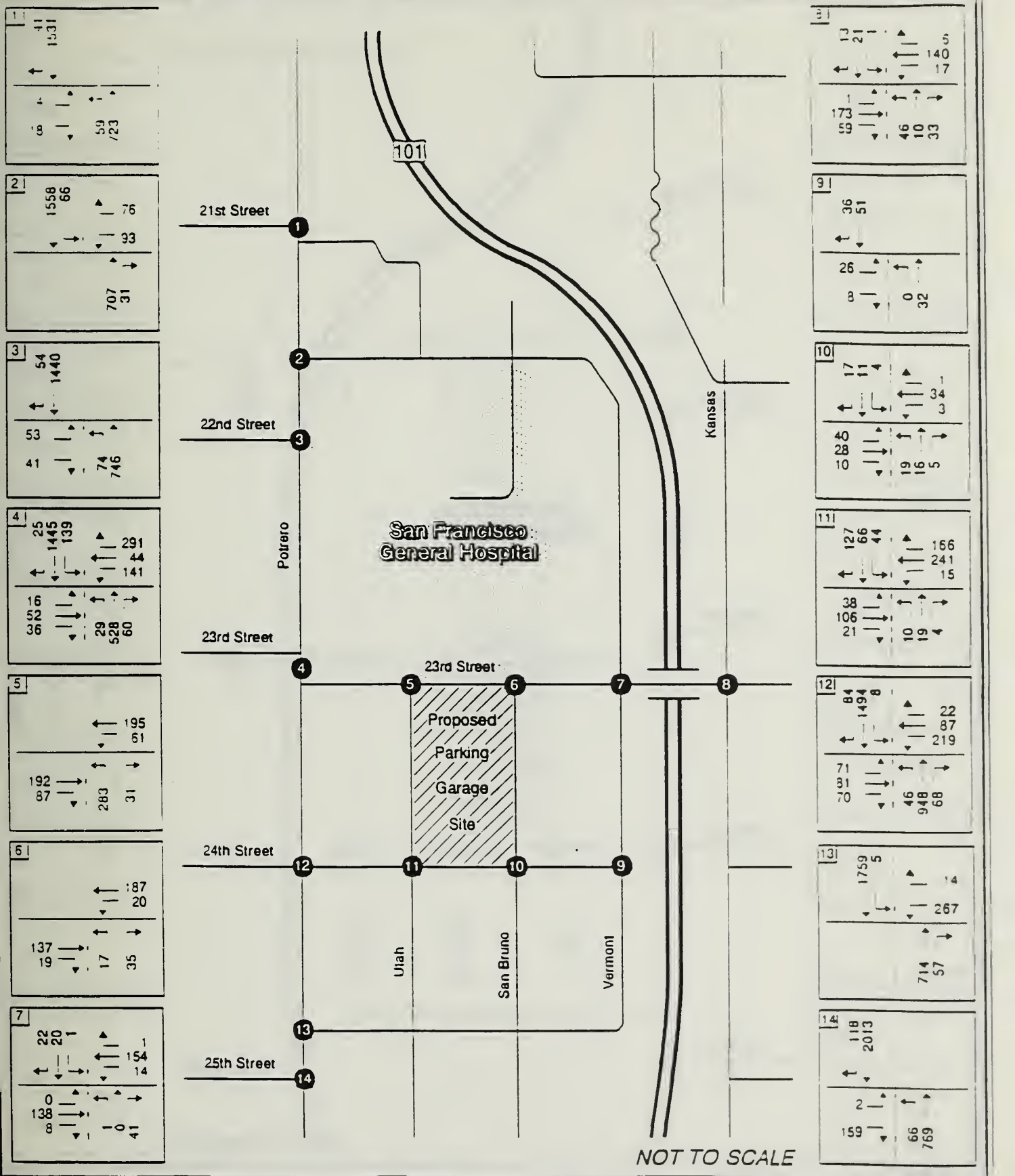
figure 7



Existing + Project
1200 Space Garage With RPP, Low TSM, Low Parking Rates

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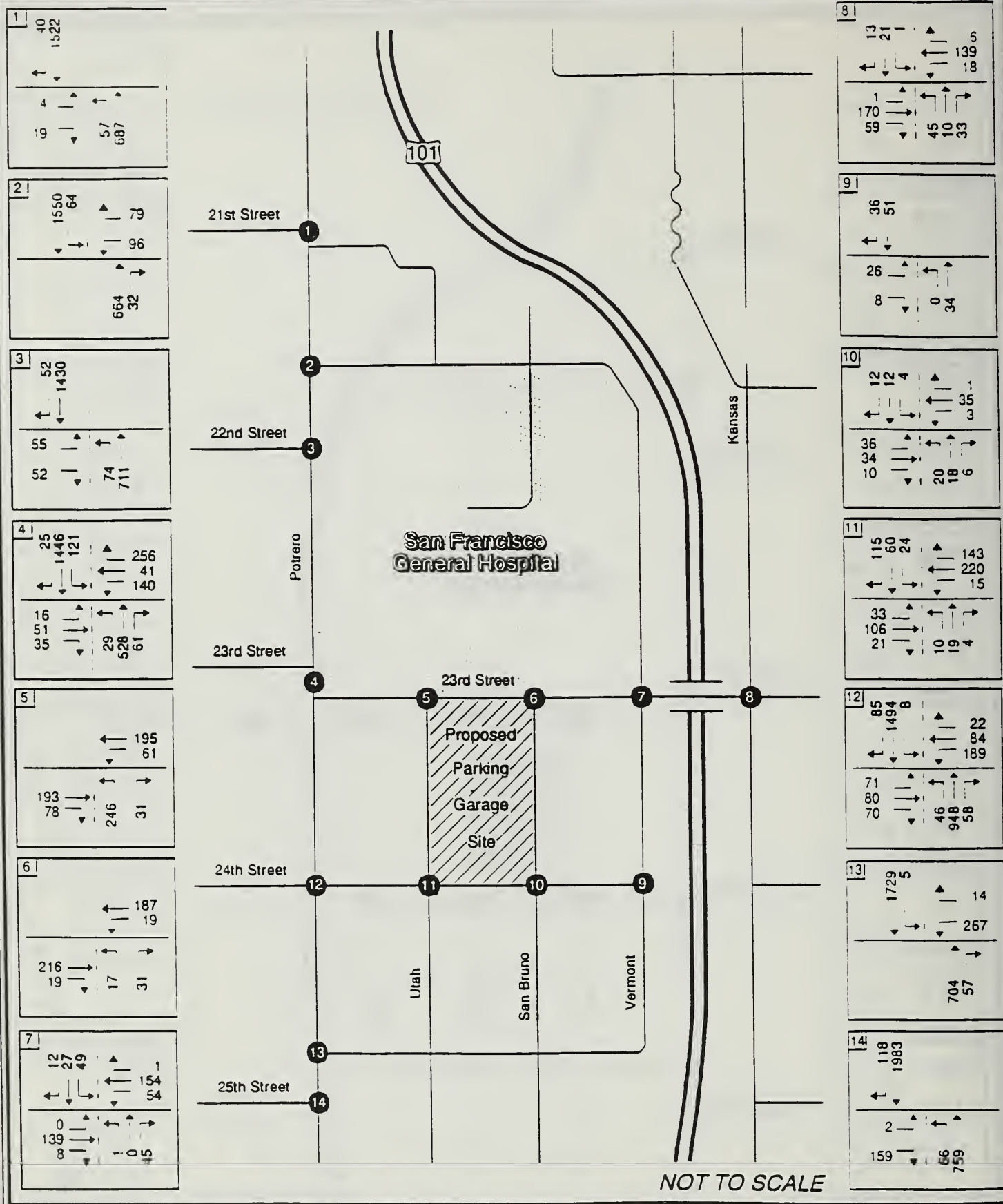
figure 8



Existing + Project
1200 Space Garage With RPP
High TSM, Low Parking Rates / Low TSM, High Parking Rates

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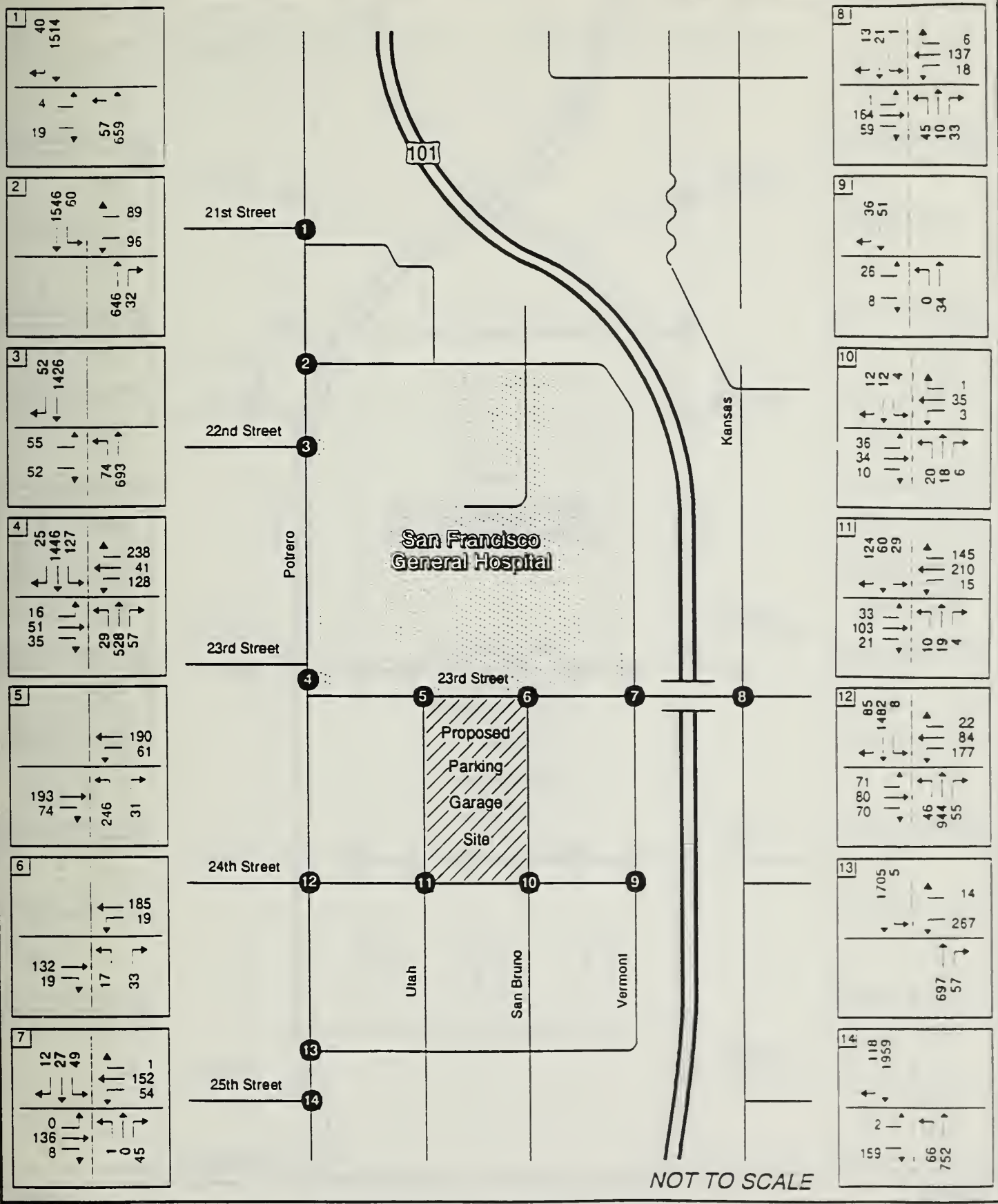
figure 9



Existing + Project
1200 Space Garage With RPP, High TSM, High Parking Rates

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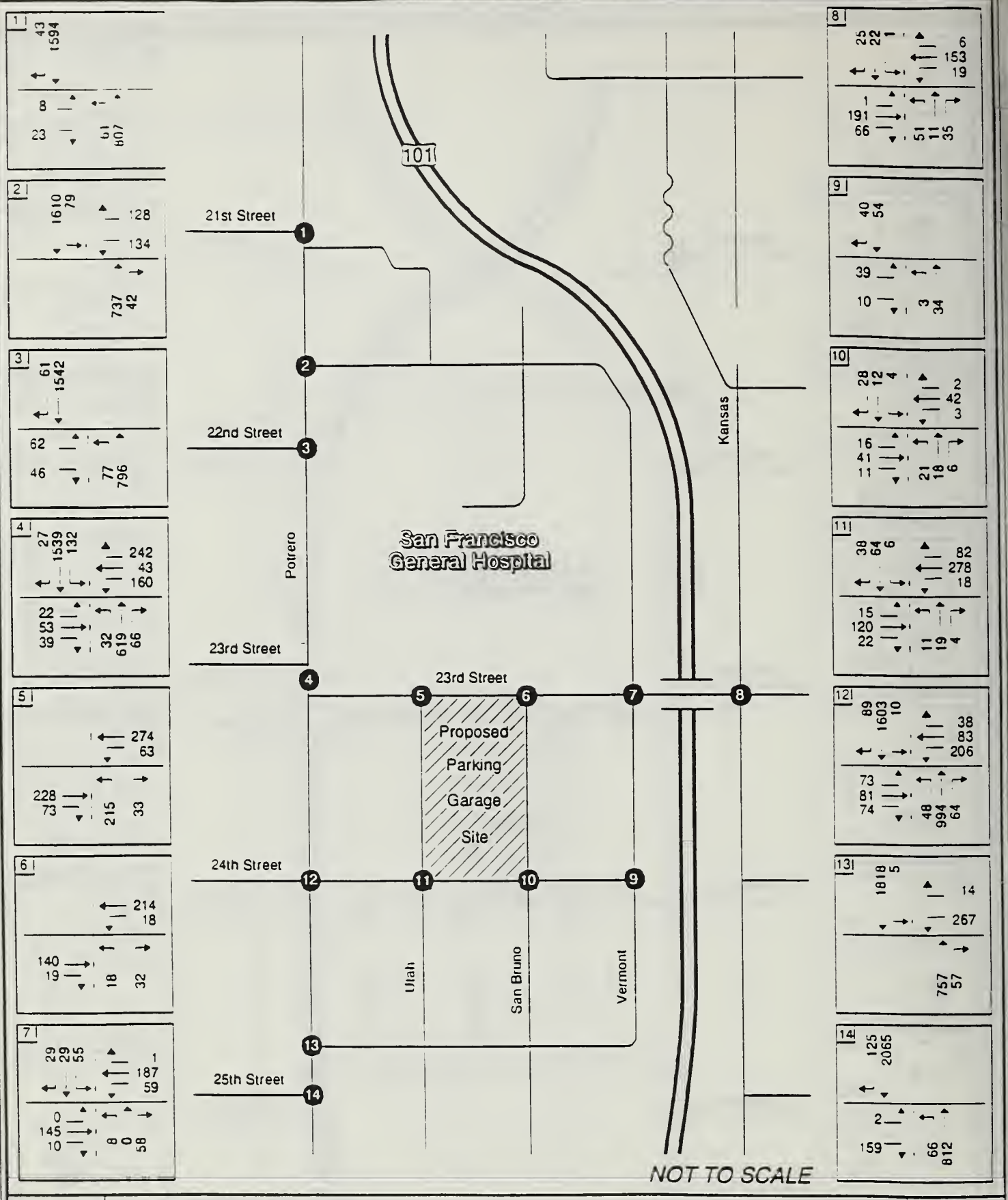
figure 10



Existing + Project + Cumulative
800 Space Garage With RPP, Low TSM, Low Parking Rates

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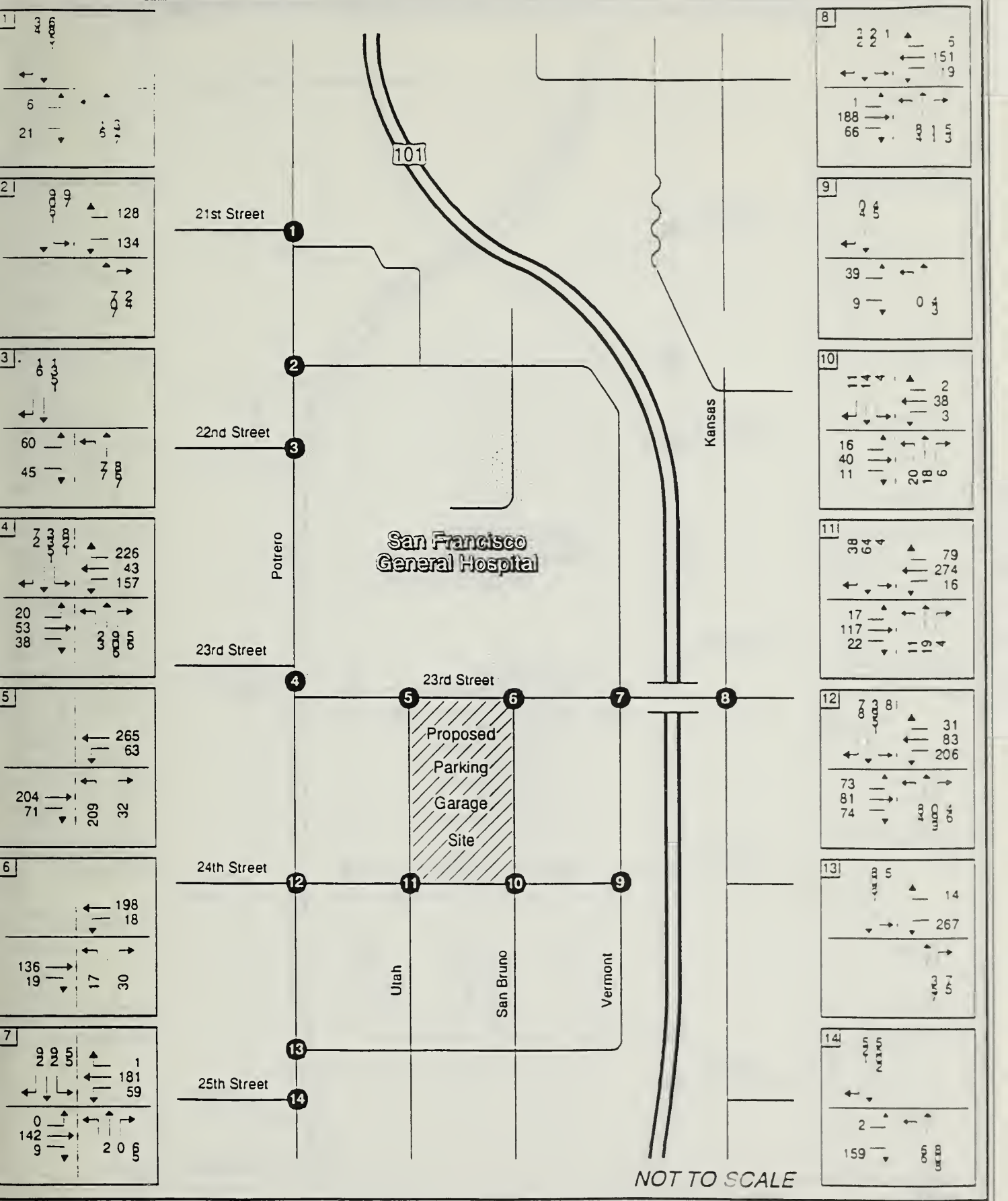
figure 11



Existing + Project + Cumulative
800 Space Garage With RPP
High TSM, Low Parking Rates / Low TSM, High Parking Rates

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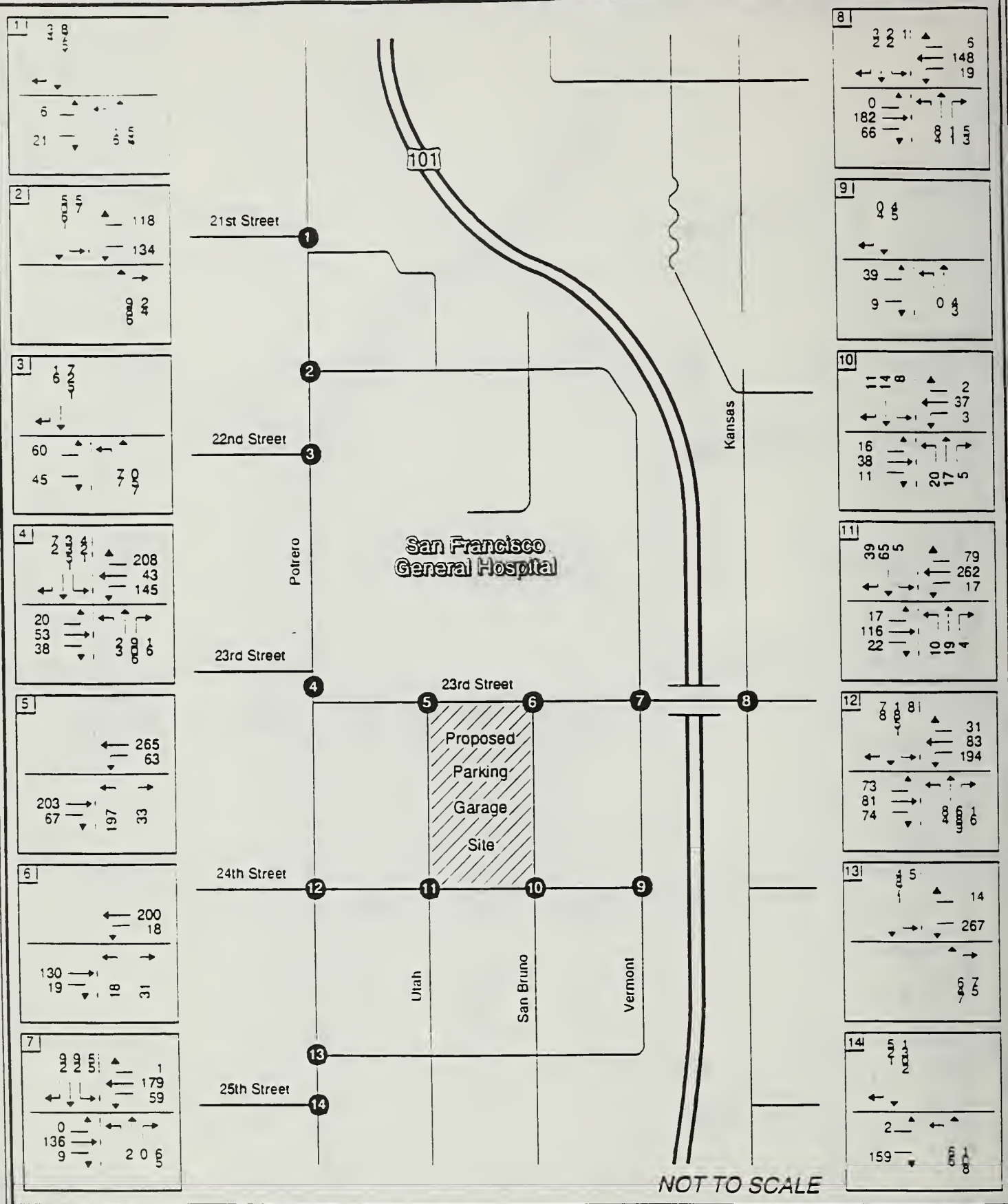
figure 12



Existing + Project + Cumulative
800 Space Garage With RPP, High TSM, High Parking Rates

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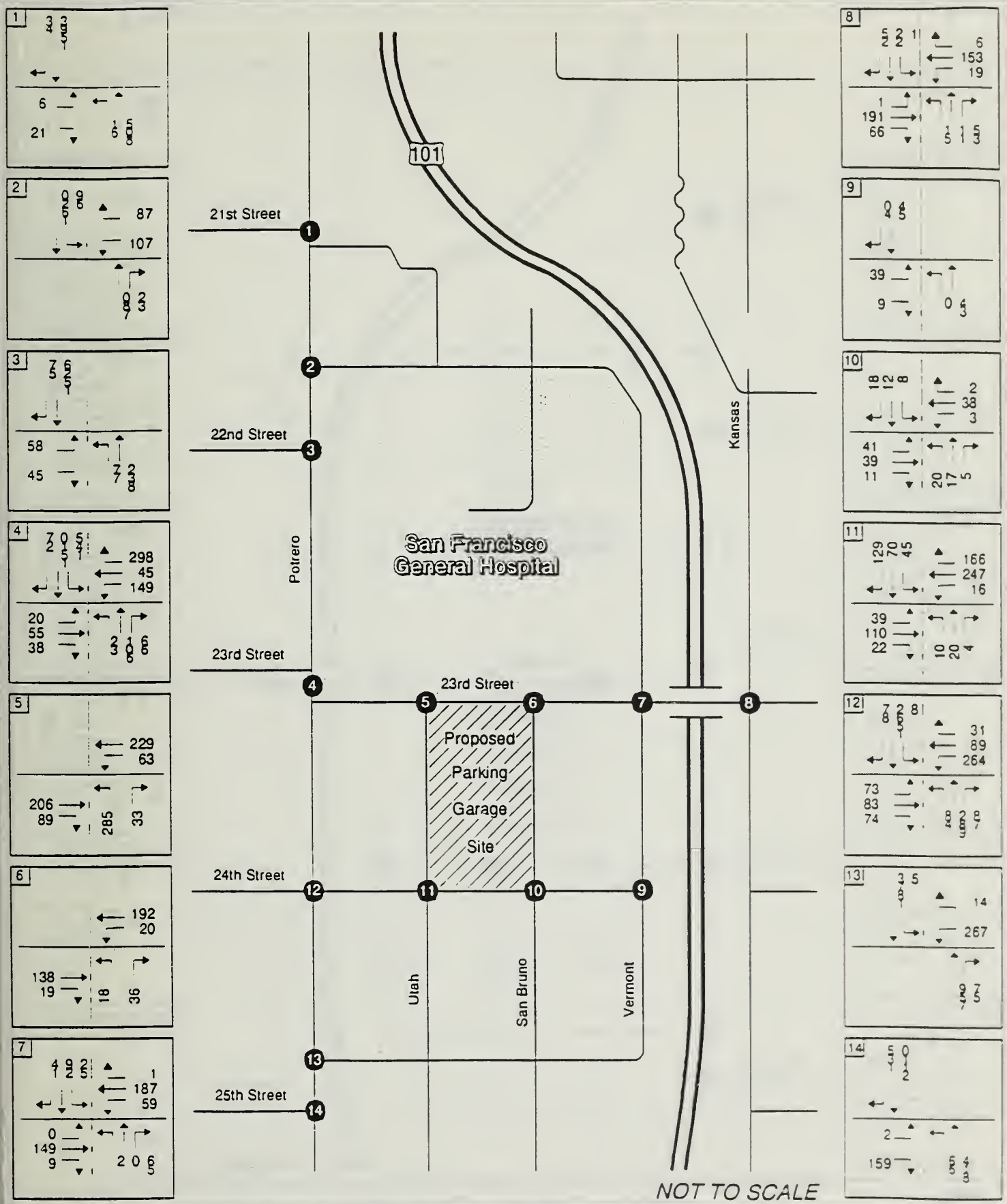
figure 13



Existing + Project + Cumulative
1200 Space Garage With RPP, Low TSM, Low Parking Rates

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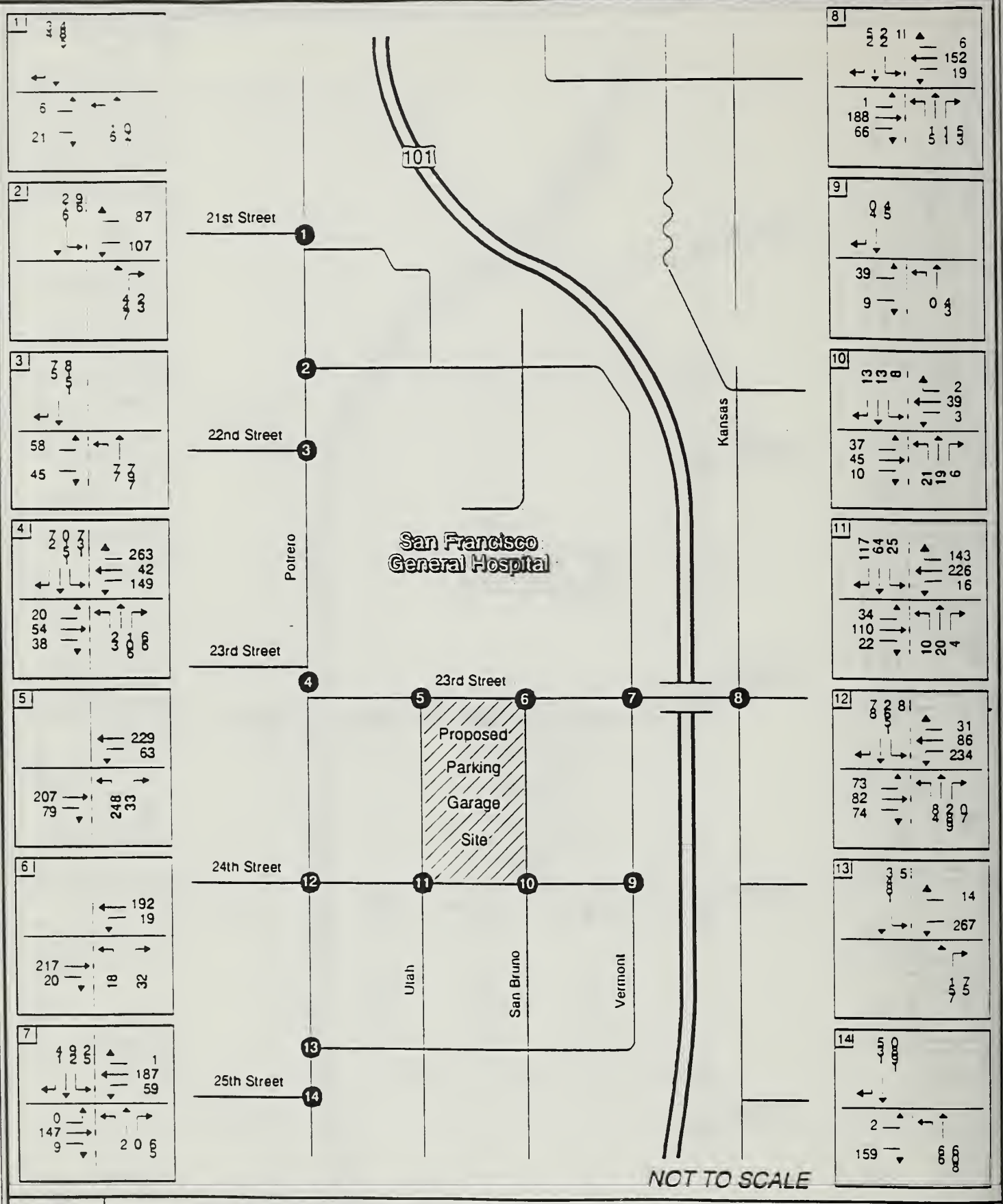
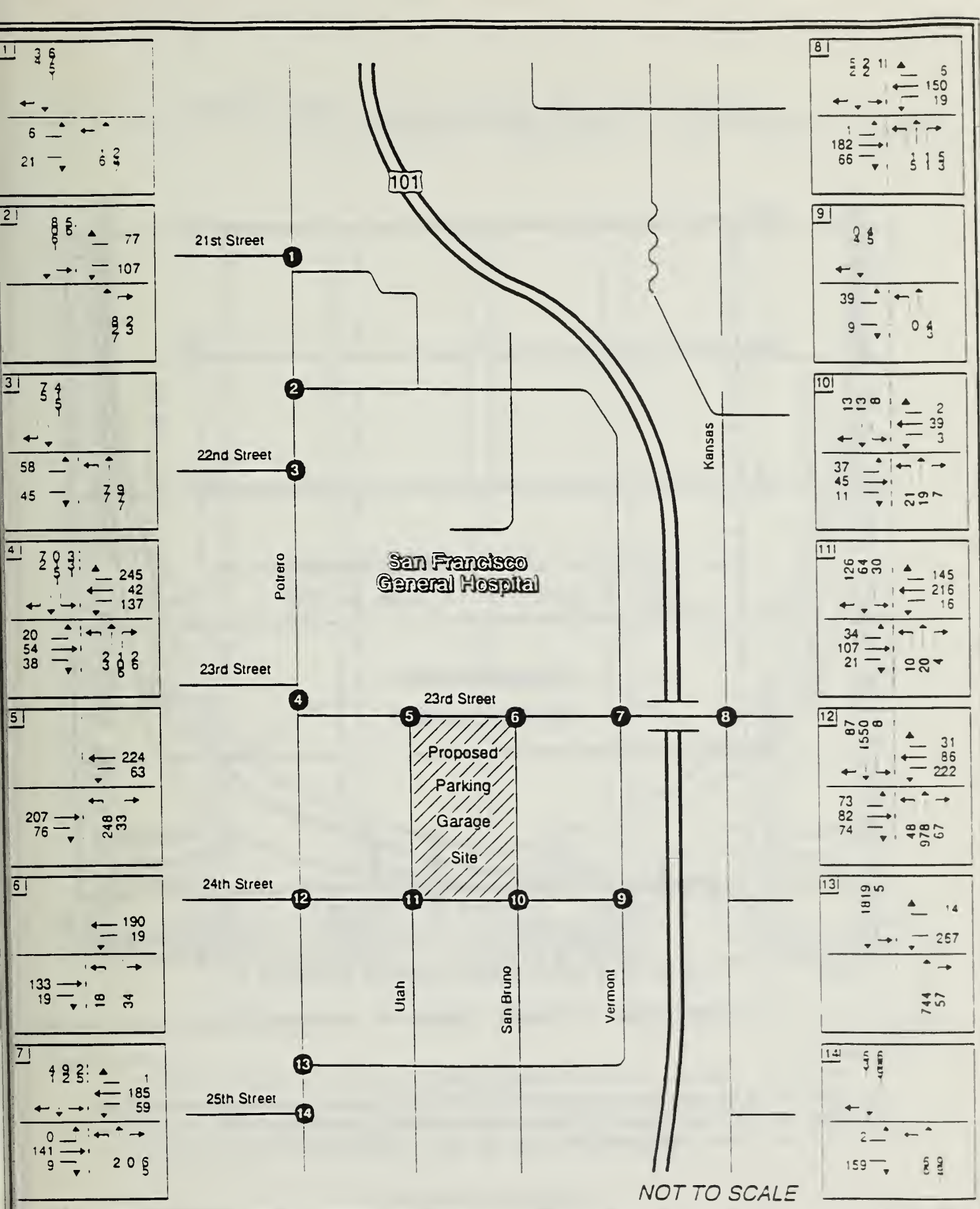
figure 14



Existing + Project + Cumulative
1200 Space Garage With RPP
High TSM, Low Parking Rates / Low TSM, High Parking Rates

omni • means

figure 15



Existing + Project + Cumulative
1200 Space Garage With RPP, High TSM. High Parking Rates

N

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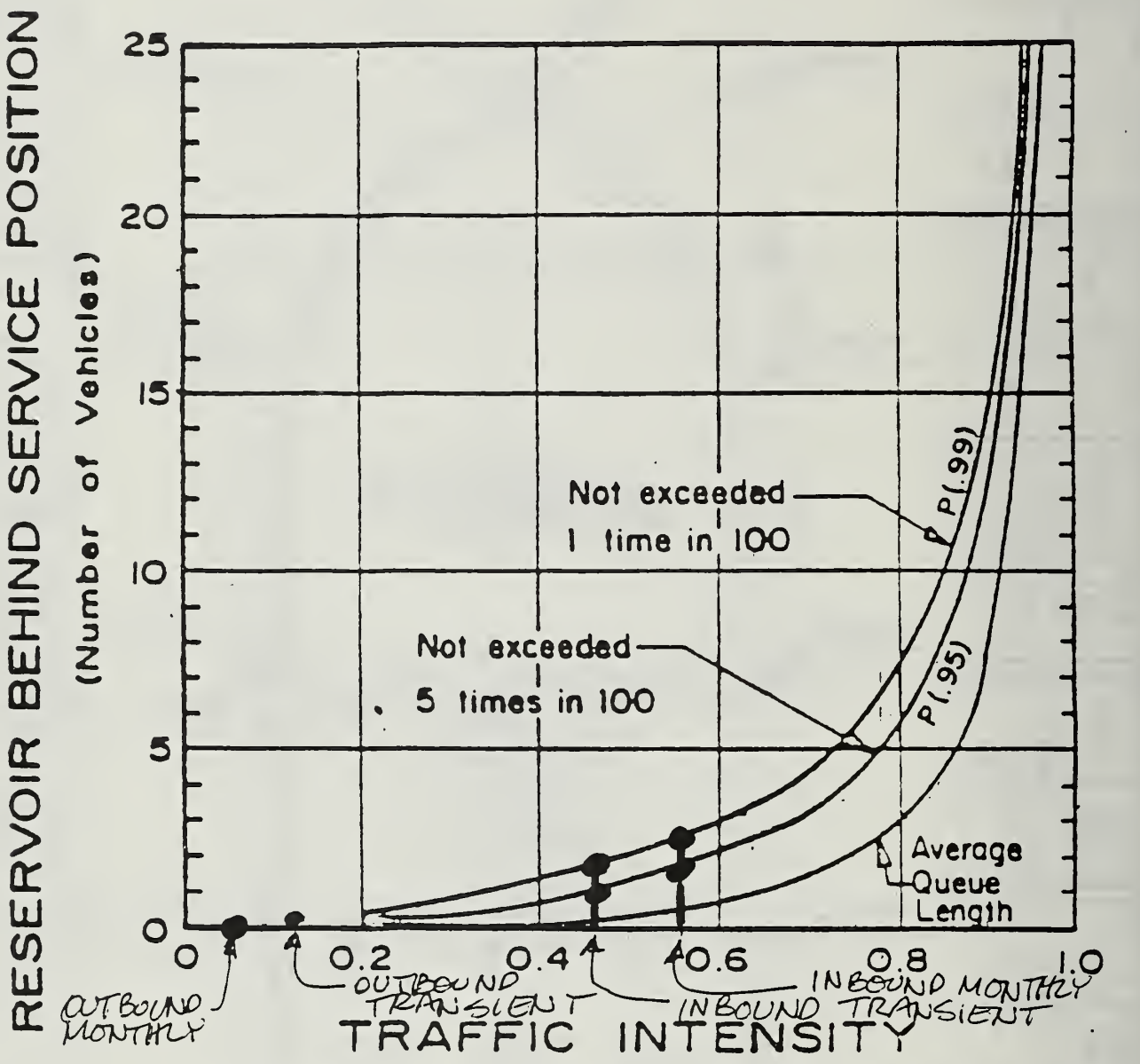
figure 16

1200 SPACE GARAGE, AM PEAK HOUR



Assumptions:

1. Arrivals follow a Poisson Distribution.
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.
4. To obtain reservoir length, use 22 feet per vehicle.

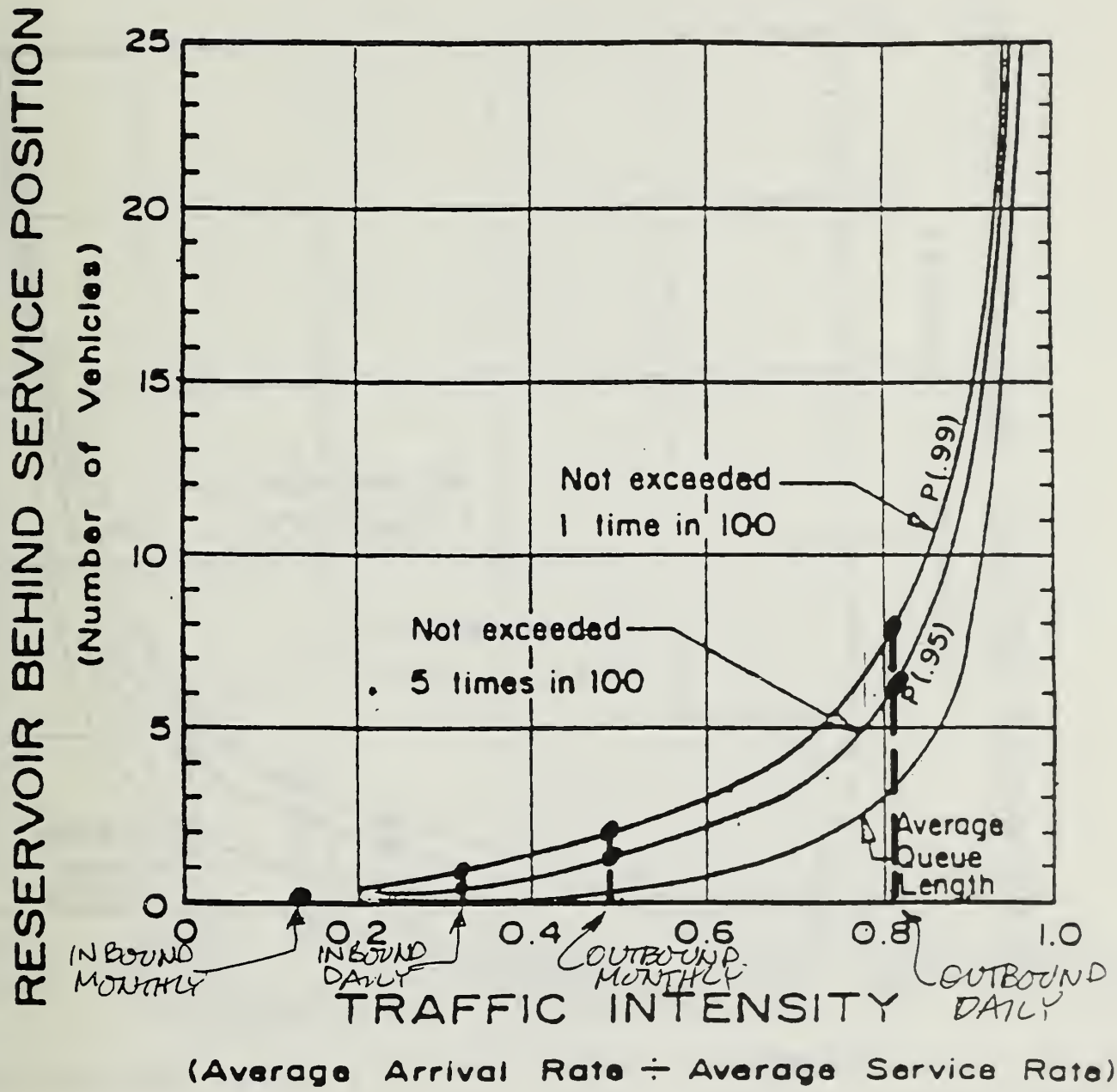
(source: Reference 12)

RESERVOIR NEEDS VS TRAFFIC INTENSITY

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE 6

850 SPACE GARAGE, PM PEAK HOUR



Assumptions:

1. Arrivals follow a Poisson Distribution.
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.
4. To obtain reservoir length, use 22 feet per vehicle.

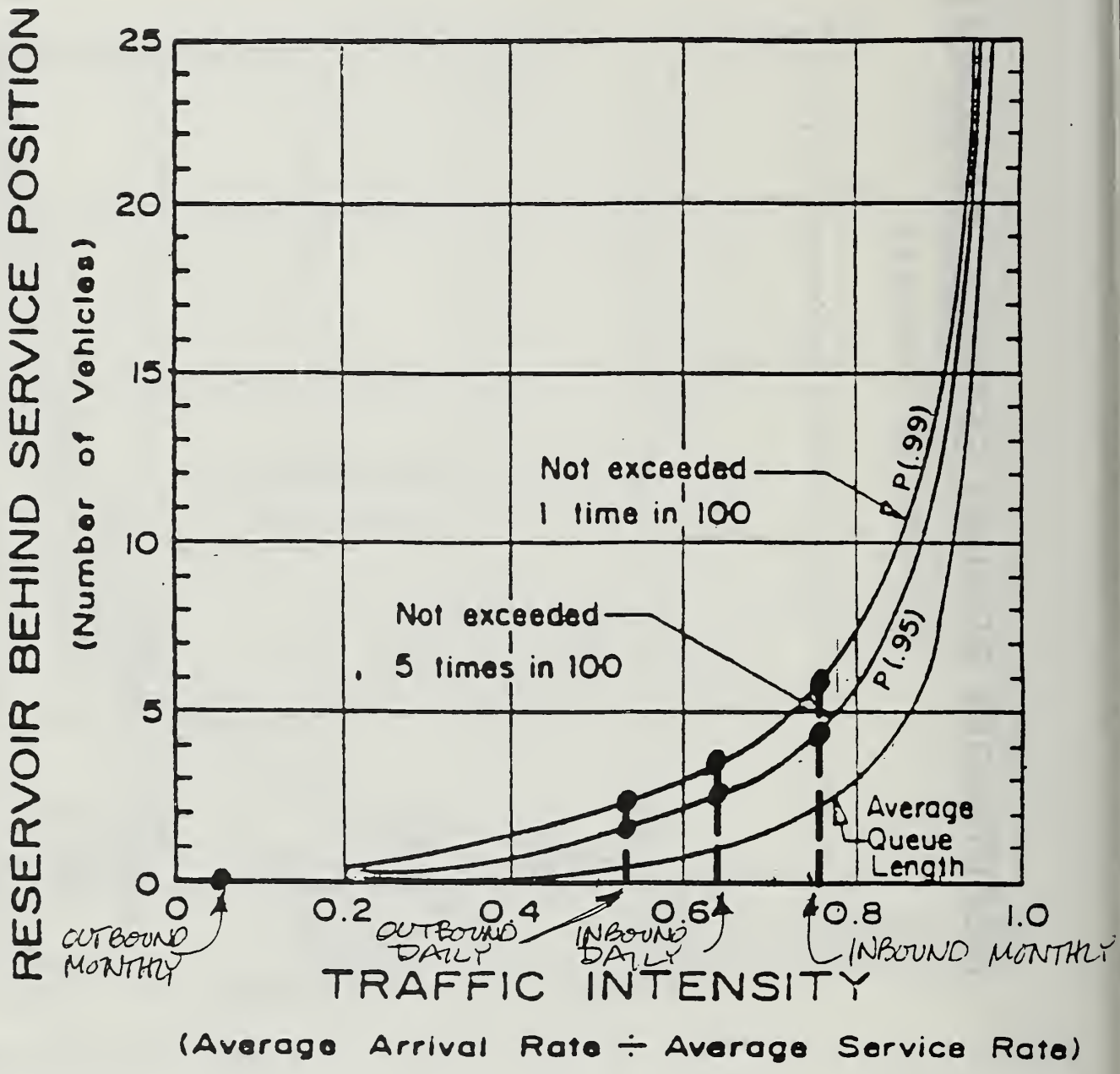
(source: Reference 12)

RESERVOIR NEEDS VS TRAFFIC INTENSITY

RTON-ASCHMAN ASSOCIATES, INC.

FIGURE 6

250 SPACE GARAGE, AM PEAK HOUR



Assumptions:

1. Arrivals follow a Poisson Distribution.
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.
4. To obtain reservoir length, use 22 feet per vehicle.

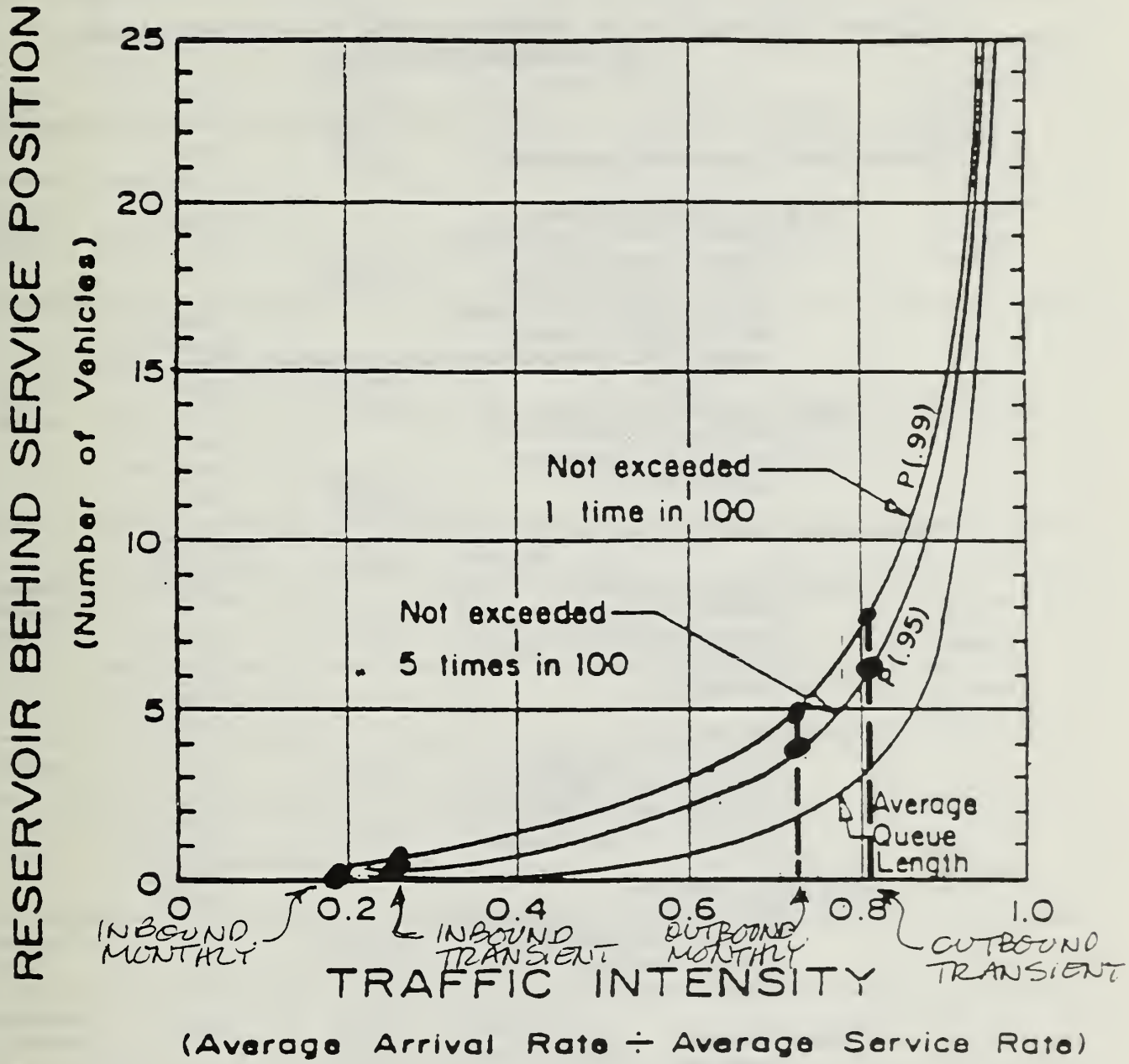
(source: Reference 12)

RESERVOIR NEEDS VS TRAFFIC INTENSITY

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE 6

1200 SPACE GARAGE, PM PEAK HOUR



Assumptions:

1. Arrivals follow a Poisson Distribution.
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.
4. To obtain reservoir length, use 22 feet per vehicle.

(source: Reference 12)

RESERVOIR NEEDS VS TRAFFIC INTENSITY

RTON-ASCHMAN ASSOCIATES, INC

FIGURE 6

DRAFT JOINT INSTITUTIONAL TRANSPORTATION BROKERS ASSOCIATION TMP REPORTING GUIDELINES

1. **Transportation Management Coordination**

   a. Parking Management Program
      - Spaces Controlled by Institution
      - Parking Charge Rates
      - Typical Parking Occupancy
      - Reserved Spaces for Ridesharers
      - Parking Allocation Policies
      - Transportation Coordinator's Authority Over Parking Policy

   b. Overall Coordination and Liaison
      - Participate in JITBA
      - Management Coordination
      - Liaison With City

2. **Transportation Brokerage Services**

   a. Overall Marketing Program
      - Information Packets
      - Promotional Materials
      - Special Events
      - Newsletters

   b. Public Transit Promotion
      - Transit Pass/Ticket Sales
      - Transit Subsidy Program
      - Transit Information Distribution
      - Targeted Promotional Events

   c. Ridesharing Promotion
      - Match List Applications Distribution
      - Targeted Promotional Events
      - Club Bus Services
      - Shuttle Services

   d. Flextime Promotion
      - Constraints
      - Potential Employee Groups
      - Promotional Materials

3. **Program Evaluation**

4. **Program Goals and Work Plan**

Source: Dowling Patterson Associates, 1990. *San Francisco General Hospital Mental Health Facility Parking and TSM Analysis*, February, 1990.

APPENDIX C. AIR QUALITY SUPPORTING INFORMATION

TABLE C–1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 Hour	0.09 ppm (180 ug/m3)	Ultraviolet Photometry	0.12 ppm (235 ug/m3)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m3)	Non-dispersive Infrared Spectroscopy (NDIR)	9.0 ppm (10 mg/m3)	Same as Primary Stds.	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemilumi-nescence	0.053 ppm (100 ug/m3)	Same as Primary Std.	Gas Phase Chemilumi-nescence
	1 Hour	0.25 ppm (470 ug/m3)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	80 ug/m3 (0.03 ppm)	-	Pararosoaniline
	24 Hour	0.05 ppm (131 ug/m3)		365 ug/m3 (0.14 ppm)	-	
	3 Hour	-		-	1300 ug/m3 (0.5 ppm)	
	1 Hour	0.25 ppm (655 ug/m3)		-	-	
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean	30 ug/m3	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	50 ug/m3		150 ug/m3	Same as Primary Stds.	Inertial Seperation and Gravimetric Analysis
	Annual Arithmetic Mean	-	-	50 ug/m3		
Sulfates	24 Hour	25 ug/m3	Turbidimetric Barium Sulfate	-	-	-
Lead	30 Day Average	1.5 ug/m3	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		1.5 ug/m3	Same as Primary Std.	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m3)	Cadmium Hydr-oxide STRactan	-	-	-
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 ug/m3)	Tedlar Bag Collection, Gas Chromatography	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%		-	-	-
Applicable Only in the Lake Tahoe Air Basin						
Carbon Monoxide	8 Hour	6 ppm (7 mg/m3)	NDIR	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%.		-	-	-

SOURCE: California Air Resources Board, 1988.

TABLE C–2

SAN FRANCISCO AMBIENT AIR QUALITY MONITORING SUMMARY
(Number of days standards were exceeded and maximum concentration measured)

Pollutant	Standard	1985	1986	1987	1988	1989	1990
Ozone							
1-Hour	> 0.09 ppm	0	0	0	0	0	0
1-Hour	> 0.12 ppm	0	0	0	0	0	0
1-Hour	> 0.20 ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)		0.09	0.07	0.09	0.09	0.08	0.06
Carbon Monoxide (Arkansas station)							
1-Hour	> 20. ppm	0	0	0	0	0	0
8-Hour	> 9. ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)		10	9	9	9	9	8
Max. 8-Hour Conc. (ppm)		7.1	7.1	6.5	7.5	7.0	5.6
Carbon Monoxide (Ellis station)							
1-Hour	> 20. ppm	1	0	0	0	0	0
8-Hour	> 9. ppm	3	2	1	1	0	0
Max. 1-Hour Conc. (ppm)		21	20	17	15	14	12
Max. 8-Hour Conc. (ppm)		15.0	12.6	10.0	12.8	9.0	6.9
Nitrogen Dioxide							
1-Hour	> 0.25 ppm	0	0	0	0	0	0
Max. 1-Hour Conc.(ppm)		0.18	0.11	0.15	0.12	0.14	0.11
Total Suspended Particulates[a]							
24-Hour	> 100 ug/m^3	5/61[b]	5/43	3/61	1/60	3/59	1/61
24-Hour	> 260 ug/m^3	0/61	0/43	0/61	0/60	0/59	0/61
Max. Daily Conc. (ug/m^3)		158	124	136	113	119	156
Inhalable Particulates (PM–10)							
24-Hour	> 50 ug/m^3	--	5/45[b]	4/55	5/40	13/62	12/61
24-Hour	> 150 ug/m^3	--	0/45	0/55	0/40	0/62	1/61
Max. Daily Conc. (ug/m^3)		--	78	65	117	101	165
Particulate Sulfate							
24-Hour	> 25 ug/m^3	0/61[b]	0/44	0/61	0/61	0/61	0/61
Max. 24-Hr. Conc. (ug/m^3)		20.1	13.6	9.7	8.6	13.3	8.9

[a] The total particulate standard was replaced by the PM-10 standard in 1986, but there are no long term PM-10 data to indicate trends. Total particulate data are included to show yearly variations and trends.

[b] x/y indicates that standards were exceeded on x days out of a total of y days on which measurements were taken that year.

conc. = concentration; ppm = parts per million; ug/m^3 = micrograms per cubic meter

Source: California Air Resources Board, Summary of Air Quality Data, 1985-1990. BAAQMD Monitoring Stations, 900 23rd Street moved to 10 Arkansas Street, San Francisco in 1987 and 939 Ellis Street station.

Project Name : S F GENERAL HOSPITAL Date :

Analysis Year = 1995 Temperature = 60
EMFAC7 VERSION : EMFAC7D ...11/88

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
Hospital	165.0/Unit	1	165	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	9.6	3.7	5.3	8.6	5.6
% Started Cold	88.2	40.1	58.0	%100.0	%100.0
Trip Speed	35	35	35	30	30
Percent Trip	27.3	21.2	51.5		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	1.7	95.6	2.7
Light Duty Trucks	14.3	2.2	95.0	2.8
Medium Duty Trucks	4.3	5.3	94.7	0.0
Heavy Duty Trucks	3.9	29.8	70.3	N/A
Heavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
Hospital	5.1	62.9	5.2

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
Hospital	63.8	0.0	0.6

APPENDIX D. NOISE SUPPORTING INFORMATION

TABLE D-1

PROJECT-RELATED NOISE LEVEL CHANGES ALONG LOCAL ROADWAYS

Road Section	Existing Noise Level	Noise Level at 50 Feet from Roadway Centerline: Existing + Project: 800-Space Garage (1)	(2)	(3)	1200-Space Garage (1)	(2)	(3)	Existing + Project + Cumulative: 800-Space Garage (1)	(2)	(3)	1200-Space Garage (1)	(2)	(3)
23rd Street													
- West of Utah	62.7	63.8	63.6	63.5	63.9	63.7	63.6	64.1	63.9	63.8	64.2	64.0	63.9
- East of Utah	62.9	62.5	62.2	62.2	62.0	62.0	61.9	62.9	62.7	62.7	62.4	62.4	62.4
- West of San Bruno	62.1	61.0	60.8	60.7	60.7	61.6	60.6	61.1	60.8	60.8	60.8	61.7	60.7
- East of San Bruno	62.0	61.1	60.0	60.9	60.9	61.7	60.8	61.2	61.0	60.9	61.0	61.8	60.9
24th Street													
- West of Utah	58.5	61.9	61.8	61.7	62.5	62.2	62.2	62.0	62.0	61.8	62.6	62.3	62.3
- East of Utah	56.8	62.1	62.0	61.9	62.8	62.2	62.2	62.2	62.1	62.0	62.8	62.3	62.3
- West of San Bruno	56.7	56.6	55.7	55.7	56.8	56.8	56.3	57.2	56.5	56.4	57.4	57.3	56.9
- East of San Bruno	54.6	54.1	53.8	53.8	53.8	54.2	54.2	55.1	54.8	54.8	54.9	55.3	55.3
Utah Street													
- South of 23rd	61.6	60.9	60.8	60.6	61.8	61.3	61.3	61.0	60.9	60.7	61.9	61.4	61.4
- North of 24th	56.7	58.5	58.5	58.5	61.8	61.1	61.3	58.7	58.6	58.7	61.9	61.2	61.4
- South of 24th	56.6	56.3	56.3	56.3	56.5	56.3	56.3	56.6	56.5	56.5	56.7	56.5	56.5
San Bruno Avenue													
- South of 23rd	53.5	54.4	54.4	54.2	54.7	54.5	54.6	54.6	54.4	54.5	54.8	54.6	54.7
- North of 24th	53.0	53.7	52.9	54.0	54.6	54.3	54.3	54.2	53.3	54.4	55.1	54.8	54.8
- South of 24th	53.7	53.4	53.3	53.3	53.2	53.5	53.5	53.7	53.7	53.6	53.5	53.7	53.8

NOTES:
(1) Residential parking program with low TSM and low parking rates assumed
(2) Residential parking program with high TSM and high parking rates or low TSM and high parking rates assumed
(3) Residential parking program with high TSM and high parking rates assumed

APPENDIX E

REFERENCES

Bolt, Beranek, and Newman, 1971. *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances.*

Bolt, Beranek and Newman, 1973. *Fundamentals and Abatement of Highway Traffic Noise.* Federal Highway Administration, Washington, D.C.

California Air Resources Board, 1980. *Documentation of the 1977 Area Source Emissions Inventory.*

California Air Resources Board, 1985-1990. *Summary of Air Quality Data.*

Caltrans, 1986. *Traffic Manual.*

City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan, Environmental Protection Element.*

City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan, Transportation Element.*

City and County of San Francisco, Department of City Planning, no date. *San Francisco Master Plan, Urban Design Element.*

City and County of San Francisco, Department of City Planning, 1976. *Architectural Survey Inventory.*

City and County of San Francisco, Department of City Planning, 1988. *Transportation Management Program in Greater Downtown*, January 1988.

City and County of San Francisco, 1989. *San Francisco Planning Code, Section 727.1*, June 1989.

City and County of San Francisco, 1990. *Zoning Maps*, City and County of San Francisco Municipal Code. September 30, 1990.

City and County of San Francisco, Department of City Planning, 1990. *San Francisco General Hospital Mental Health Skilled Nursing Facility, Final Environmental Impact Report.* 88.089E. Certified October 25, 1990.

City and County of San Francisco, Department of Public Health, 1987. *San Francisco General Hospital Medical Center Institutional Master Plan.* Kaplan, McLaughlin, Diaz and Gordon H. Chong & Associates. November 1987.

Clayton Environmental Consultants, Inc. 1989. *MUNI Survey 24th Street and Utah Street San Francisco, California.* Prepared for the San Francisco Department of Public Health, February 20, 1989.

DKS Associates, 1987. *San Francisco General Hospital Medical Center, Master Plan Update, Transportation Study.* November 1987.

Dowling, Feltham and Wycko, 1991. *Factors Affecting TDM Program Effectiveness at Six San Francisco Medical Institutions.* TRB 70th Annual Meeting, January 13-17, 1991.

Dowling Patterson Associates, 1990. *San Francisco General Hospital Mental Health Facility Parking and TSM Analysis.* February 1990.

Giroux, Hans, 1991. *Noise Impact Analysis for One Hutton Centre*, Santa Ana, California.

Harding Lawson Associates, 1989. *Preliminary Petroleum Leak Investigation MUNI Maintenance Facility 24th and Utah Street Garage, San Francisco, California*. Prepared for City and County of San Francisco, Department of Public Works, Bureau of Architecture, March 9, 1989.

Harding Lawson Associates, 1990. Draft Letter from James Ordons, Project Geologist to Larry James, Project Manager, Public Utilities Commission regarding proposal for Phase III Product Recover/Remedial Action Feasibility Study, 24th and Utah Maintenance Facility, San Francisco, California, dated September 6, 1990.

Harding Lawson Associates, 1992. *Underground Storage Tank Site Characterization, MUNI Maintenance Facility, 24th and Utah Streets, San Francisco, California*. Prepared for City and County of San Francisco Department of Public Health, June 23, 1992.

Hupman, Jan M. and Chavez, David, 1992. *Cultural Resources Investigation for the San Francisco General Hospital Parking Garage EIR*, San Francisco, California.

Kyte, Michael, 1990. *All-Way-Stop-Controlled (AWSC) Intersections*. University of Idaho, September 9, 1990. Also incorporated into Transportation Research Board, Circular 373.

Marconi, William, 1989. *Traffic Study for San Francisco General Hospital Mental Health Facility and Parking Garages*, September 12, 1989.

Malone, Jonathan H., Landmarks Preservation Advisory Board, 1988. Letter Mr. Douglas G. Wright Director, Planning and Development Public Utilities Commission regarding PUC/MUNI 24th and Utah Streets Property, Lot 1 in Assessor's Block 4213, dated May 10, 1988.

Nelson\Nygaard, 1989. *San Francisco General Hospital Parking Management Study*. Draft Final Report, May 30, 1989.

Omni-Means, 1992. *San Francisco General Hospital Proposed Parking Garage, Transportation Technical Appendix*. September 1992.

San Francisco Public Utilities Commission, 1987. Resolution No. 87-0379.

Transportation Research Board, 1980. *Interim Material on Highway Capacity*. Circular 212 Planning Method, January 1980.

Transportation Research Board, 1985. *Highway Capacity Manual*. Special Report 209.

U.S. Environmental Protection Agency, 1974. *Protected Noise Levels, Condensed Version of EPA Levels Document*. November. EPA 550/9-79-100.

Weant, Robert A. and Levinson, Herbert S., 1990. *Parking*. ENO Foundation.

Wilbur Smith Associates and International Parking Design, 1990. *Economic Analysis and Market Survey for the 24th and Utah Street Parking Facility*. Prepared for the San Francisco General Hospital Medical Center, City and County of San Francisco, October 19, 1990.

Woodbridge, Sally, 1991. *Report on the Architectural Significance of the PUC/MUNI 24th and Utah Streets Property*. Prepared for the San Francisco Department of City Planning.

APPENDIX F

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